



Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

October 2, 2003

100 North Senate Avenue  
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Indianapolis, Indiana 46206-6015  
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(800) 451-6027  
[www.in.gov/idem](http://www.in.gov/idem)

TO: Interested Parties / Applicant

RE: Ft. Wayne Foundry - Columbia City Division / 183-7530-00023

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and



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## **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**Fort Wayne Foundry - Columbia City Division  
2300 Cardinal Drive  
Columbia City, Indiana 46725**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T183-7530-00023	
Issued by: Original Signed by Janet McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: October 2, 2003  Expiration Date: October 2, 2008

- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary aluminum foundry for the production of aluminum castings.

Responsible Official:	Mr. Dan Rollins - Plant Manager
Source Address:	2300 Cardinal Drive, Columbia City, Indiana 46725
Mailing Address:	2300 Cardinal Drive, Columbia City, Indiana 46725
General Source Phone Number:	219-483-0382
SIC Code:	3365
County Location:	Whitley
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

I. The following equipment is part of the 30/30 line and was constructed in 1986:

#### Foundry Operations

- (1) Four (4) natural gas-fired reverberatory melt furnaces identified as RF-1, RF-2, RF-3, and RF-4, each rated at 8.25 million (mm) British thermal units (Btu) per hour, and each with a maximum capacity of melting 2.0 tons of aluminum per hour, RF-1 and RF-2 exhausting through one (1) stack (S/V ID S-1) and RF-3 and RF-4 exhausting through one (1) stack (S/V ID S-2);
- (2) One (1) sand handling system, identified as SH-1, with a maximum capacity of handling 130 tons of sand per hour, utilizing a baghouse (CD-1) for particulate matter control and exhausting through one (1) stack (S/V ID CD-1);
- (3) Two (2) pouring/casting operations identified as P-1 and P-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, exhausting uncontrolled inside the plant;
- (4) Two (2) castings cooling operations identified as C-1 and C-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);

- (5) Two (2) castings knockout/shakeout operations identified as SK-1 and SK-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);
- (6) One (1) cleaning/finishing operation, identified as F-1, which includes the use of seven (7) belt grinders and one (1) cut off wheel with a maximum capacity of finishing eight (8) tons of unfinished metal per hour, utilizing a baghouse (CD-5) for particulate matter control and exhausting inside the plant;
- (7) One (1) shotblasting unit, identified as SB-1, with a maximum capacity of blasting four (4) tons of metal castings per hour, utilizing a baghouse (CD-2) for particulate matter control, and exhausting inside the plant;
- (8) One (1) metal reclamation screening operation, consisting of two (2) waste sand metal reclamation screens, with a maximum sand throughput of 12 tons per hour, utilizing a baghouse (CD-6) for particulate matter control, and exhausting inside the plant; and
- (9) one (1) hexachloroethane fluxing operation, with a maximum usage rate of one (1) pound of hexachloroethane flux per ton of metal melted.

Note: The hexachloroethane fluxing operation is used in both the 30/30 line and the 40/40 line.

- II. The following equipment is part of the 40/40 line and was constructed in 1995:

#### Foundry Operations

- (1) One (1) natural gas-fired reverberatory melt system rated at 25 million (MM) British thermal units (Btu) per hour, identified as RF-5, with a maximum capacity of melting 5.0 tons of aluminum per hour, exhausting through one (1) stack (S-3);
- (2) One (1) sand handling system identified as SH-2, with a maximum capacity of handling 100 tons of sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (3) One (1) pouring/casting operation identified as P-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (4) One (1) castings cooling operation identified as C-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-3), and exhausting through one (1) stack (S/V ID CD-3);
- (5) One (1) castings knockout/shakeout operation identified as SK-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (6) Cleaning/finishing operations identified as F-2, which includes the use of trim presses, cutoff saws, and hand-held deburring tools, with a maximum capacity of finishing 5.0 tons of unfinished metal per hour, utilizing a baghouse (CD-3) for particulate matter control and exhausting through one (1) stack (S/V ID CD-3);



- (7) One (1) shotblasting unit, identified as SB-2, with a maximum capacity of blasting 2.5 tons of metal per hour, utilizing a baghouse (CD-4) for particulate matter control, and exhausting inside the plant; and
- (8) One (1) aluminum chip charger, with a maximum capacity to charge 2,700 pounds of aluminum chips per hour to RF-5, constructed in 1999, consisting of a pneumatic conveyor handling system, a natural gas-fired heated cyclone for preheating the aluminum chips, with a maximum heat input rate of 1.3 million (MM) British thermal units (Btu) per hour, a charge cyclone, and a charge well to introduce the chips into the furnace RF-5, utilizing a baghouse (BH7) to control particulate emissions, and exhausting through four (4) stacks (S/V ID M1, M2, M3, and BH7).

### III. Core Making Facilities

- (1) Eight (8) Isocure cold box core making facilities in 30/30 line, identified as ISO #1 - ISO #8, with ISO #1 - #4 constructed in 1985, ISO #5 - #6 constructed in 1988, and ISO #7 - #8 constructed in 1989, with a total maximum capacity of processing 4.72 tons of cores per hour, 20 pounds of resin per ton of cores, and 2.0 pounds of TEA catalyst per ton of cores, utilizing an amine gas scrubber (SC-1) for TEA emissions control, and exhausting through one (1) stack (S/V ID SC-1); and
- (2) Five (5) Isocure cold box core making facilities in 40/40 line, constructed in 1995, identified as ISO #9 - ISO #13, with a total maximum capacity of processing 2.95 tons of cores per hour, 20 pounds of resin per ton of cores, and 2.0 pounds of TEA catalyst per ton of cores, utilizing an amine gas scrubber (SC-1) for TEA emissions control, and exhausting through one (1) stack (S/V ID SC-1).

#### A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) Six (6) thirty-five (35) gallon cold-cleaner parts degreasers; [326 IAC 8-3-2 and 326 IAC 8-3-5]
- (2) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [326 IAC 6-3-2]
- (3) Enclosed sand conveyors; [326 IAC 6-3-2]
- (4) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations; [326 IAC 6-3-2]
- (5) one (1) Hotbox coremaking machine emitting less than 25 pounds of PM per day and 15 pounds of VOC per day, and exhausting through one (1) stack (S/V ID SM-1); [326 IAC 6-3-2] and
- (6) one (1) waste sand metal reclamation screen, processing a maximum of twelve (12) tons of sand per hour, and emitting less than twenty-five (25) pounds of PM per day. [326 IAC 6-3-2]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

### B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; or
  - (3) Denial of a permit renewal application.
- (b) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

- (c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

**B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;

- (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

**B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.12 Emergency Provisions [326 IAC 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,  
Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) In addition to the nonapplicability determinations set forth in Sections D of this permit, the IDEM, OAQ has made the following determinations regarding this source:

None of the emission units listed in Section A, Emission Units and Pollution Control Equipment Summary are subject to the requirements of 40 CFR Part 63, Subpart RRR, National Emission Standards because this source is not a secondary aluminum production facility as defined in 40 CFR 63.1503. Pursuant to 40 CFR 63.1503, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source only melts clean charge, customer returns, or internal scrap and does not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. The aluminum chip charger is not used to dry aluminum chips and is only used for chip handling and charging to the reverberatory furnace identified as RF-5. It is not a thermal chip dryer as defined in 40 CFR 63.1503. Therefore, this source is not subject to this rule.

Note: This non-applicability determination is based on the final rule as published in the December 30, 2002 Federal Register.

- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:



Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**

[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-4]**

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
  - (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]  
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]  
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]  
[326 IAC 2-7-12 (b)(2)]

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2][IC 13-30-3-1][IC 13-30-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

---

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source
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### Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**C.7 Stack Height [326 IAC 1-7]**

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

---

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Demolition and renovation  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.



## **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

### **C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

### **C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

## **Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

### **C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 12, 1996.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

- (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]**

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- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

### **Stratospheric Ozone Protection**

#### **C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- I. The following equipment is part of the 30/30 line and was constructed in 1986:
- Foundry Operations
- (1) Four (4) natural gas-fired reverberatory melt furnaces identified as RF-1, RF-2, RF-3, and RF-4, each rated at 8.25 million (mm) British thermal units (Btu) per hour, and each with a maximum capacity of melting 2.0 tons of aluminum per hour, RF-1 and RF-2 exhausting through one (1) stack (S/V ID S-1) and RF-3 and RF-4 exhausting through one (1) stack (S/V ID S-2);
  - (2) One (1) sand handling system, identified as SH-1, with a maximum capacity of handling 130 tons of sand per hour, utilizing a baghouse (CD-1) for particulate matter control and exhausting through one (1) stack (S/V ID CD-1);
  - (3) Two (2) pouring/casting operations identified as P-1 and P-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, exhausting uncontrolled inside the plant;
  - (4) Two (2) castings cooling operations identified as C-1 and C-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);
  - (5) Two (2) castings knockout/shakeout operations identified as SK-1 and SK-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);
  - (6) One (1) cleaning/finishing operation, identified as F-1, which includes the use of seven (7) belt grinders and one (1) cut off wheel with a maximum capacity of finishing eight (8) tons of unfinished metal per hour, utilizing a baghouse (CD-5) for particulate matter control and exhausting inside the plant;
  - (7) One (1) shotblasting unit, identified as SB-1, with a maximum capacity of blasting four (4) tons of metal castings per hour, utilizing a baghouse (CD-2) for particulate matter control, and exhausting inside the plant;
  - (8) One (1) metal reclamation screening operation, consisting of two (2) waste sand metal reclamation screens, with a maximum sand throughput of 12 tons per hour, utilizing a baghouse (CD-6) for particulate matter control, and exhausting inside the plant; and
  - (9) one (1) hexachloroethane fluxing operation, with a maximum usage rate of one (1) pound of hexachloroethane flux per ton of metal melted.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate [326 IAC 6-3]

- (a) The particulate emissions from the emission units listed in the table below shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

The allowable emissions for each facility operating at its maximum process weight rate are as follows:

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lb/hr)
Reverberatory Melt Furnace #1 (RF-1)	2.00	6.52
Reverberatory Melt Furnace #2 (RF-2)	2.00	6.52
Reverberatory Melt Furnace #3 (RF-3)	2.00	6.52
Reverberatory Melt Furnace #4 (RF-4)	2.00	6.52
Pouring/Casting (P-1)	61.36*	46.50
Pouring/Casting (P-2)	61.36*	46.50
Castings Cooling (C-1,C-2)	122.70*	53.36
Sand Handling (SH-1)	130.00	53.95
Knockout/Shakeout (SK-1, SK-2)	122.70*	53.36
Cleaning/Finishing (F-1)	8.00	16.51
Shotblasting (SB-1)	4.00	10.38
Metal Reclamation Screening	12.00	21.67

\* Includes metal, mold sand, and core sand throughput.

- (b) For purposes of demonstrating compliance with the particulate emission limits for the two (2) reverberatory furnaces #1 and #2 (RF-1 and RF-2) both exhausting through stack S-1, the allowable particulate emission rate from stack S-1 shall be limited to 13.04 pounds per hour.
- (c) For purposes of demonstrating compliance with the particulate emission limits for the two (2) reverberatory furnaces #3 and #4 (RF-3 and RF-4) both exhausting through stack S-2, the allowable particulate emission rate from stack S-2 shall be limited to 13.04 pounds per hour.
- (d) For purposes of demonstrating compliance with the particulate emission limits for the two (2) castings cooling operations (C-1, C-2), sand handling (SH-1), and the two (2) knockout/shakeout operations (SK-1, SK-2) all exhausting through baghouse CD-1, the allowable particulate emission rate from baghouse CD-1 shall be limited to 160.67 pounds per hour.

#### D.1.2 Particulate Matter (PM) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The total PM emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.
- (b) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.

- (c) The total PM emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (d) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (e) The PM emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (f) The PM-10 emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (g) The PM emissions from the baghouse (CD-1), controlling PM emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (h) The PM-10 emissions from the baghouse (CD-1), controlling PM-10 emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (i) The PM emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.
- (j) The PM10 emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.
- (k) The PM emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (l) The PM10 emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (m) The PM emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.
- (n) The PM10 emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 not applicable.

#### D.1.3 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

- (a) The VOC emissions from the two (2) pouring/casting operations (P-1 and P-2), the two (2) castings knockout/shakeout operations (SK-1 and SK-2), and the two (2) castings cooling operations (C-1 and C-2) shall not exceed 1.34 pounds of VOC per ton of metal throughput.
- (b) The total throughput of metal to the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The total throughput of metal to the two (2) castings knockout/shakeout operations (SK-1 and SK-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.



- (d) The total throughput of metal to the two (2) castings cooling operations (C-1 and C-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The metal throughput limit and the VOC emissions limits yield total VOC emissions from the pouring/casting operations (P-1 and P-2), the castings knockout/shakeout operations (SK-1 and SK-2), and the two (2) castings cooling operations (C-1 and C-2) that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.

**D.1.4 Secondary Aluminum NESHAP [40 CFR 63, Subpart RRR]**

Each of the reverberatory furnaces (RF-1, RF-2, RF-3, RF-4) shall only melt clean charge, customer returns, or internal scrap as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

**D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.

**Compliance Determination Requirements**

**D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

During the period within 180 days after issuance of this permit, in order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM-10 testing on the two (2) reverberatory furnaces identified as RF-1 and RF-2 which exhaust through stack S-1 or the two (2) reverberatory furnaces identified as RF-3 and RF-4 which exhaust through stack S-2, one (1) of the pouring/casting operations (P-1 or P-2), and the stack exhaust for baghouse CD-1 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

**D.1.7 Particulate Matter (PM)**

In order to comply with conditions D.1.1 and D.1.2, the baghouses for particulate control identified as CD-1, CD-2, CD-5, and CD-6 shall be in operation and control emissions from the castings cooling (C-1,C-2), sand handling (SH-1), knockout/shakeout (SK-1, SK-2), cleaning/finishing (F-1), shotblasting operations (SB-1), and the sand system for metal screening at all times that these facilities are in operation.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.8 Visible Emissions Notations**

- (a) Visible emission notations of the CD-1 baghouse stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### **D.1.9 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each of the baghouses identified as CD-1, CD-2, CD-5, and CD-6 controlling the castings cooling (C-1,C-2), sand handling (SH-1), knockout/shakeout (SK-1,SK-2), cleaning/finishing (F-1), and shotblasting (SB-1) operations, and the metal reclamation screening at least once per shift when the systems are in operation. When for any one reading, the pressure drop across any baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### **D.1.10 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the castings cooling (C-1,C-2), sand handling (SH-1), knockout/shakeout (SK-1,SK-2), cleaning/finishing (F-1), and shotblasting (SB-1) operations and metal reclamation screening operation. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.1.11 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.1.12 Record Keeping Requirements**

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- (a) To document compliance with condition D.1.3(c) and (d), the Permittee shall maintain records of the monthly throughput of metal to each of the pouring/casting operations (P-1 and P-2) and to each of the castings knockout/shakeout operations (SK-1 and SK-2). Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain records of visible emission notations of the baghouse CD-1 stack exhaust once per shift.
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain per shift records of the total static pressure drop during normal operation for each baghouse.
- (d) To document compliance with Condition D.1.10, the Permittee shall maintain records of the results of the inspections required under Condition D.1.10.
- (e) To document compliance with Condition D.1.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.1.13 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.1.3(c) and (d) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

II. The following equipment is part of the 40/40 line and was constructed in 1995:  
Foundry Operations

- (1) One (1) natural gas-fired reverberatory melt system rated at 25 million (MM) British thermal units (Btu) per hour, identified as RF-5, with a maximum capacity of melting 5.0 tons of aluminum per hour, exhausting through one (1) stack (S-3);
- (2) One (1) sand handling system identified as SH-2, with a maximum capacity of handling 100 tons of sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (3) One (1) pouring/casting operation identified as P-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (4) One (1) castings cooling operation identified as C-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-3), and exhausting through one (1) stack (S/V ID CD-3);
- (5) One (1) castings knockout/shakeout operation identified as SK-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (6) Cleaning/finishing operations identified as F-2, which includes the use of trim presses, cutoff saws, and hand-held deburring tools, with a maximum capacity of finishing 5.0 tons of unfinished metal per hour, utilizing a baghouse (CD-3) for particulate matter control and exhausting through one (1) stack (S/V ID CD-3);
- (7) One (1) shotblasting unit, identified as SB-2, with a maximum capacity of blasting 2.5 tons of metal per hour, utilizing a baghouse (CD-4) for particulate matter control, and exhausting inside the plant; and
- (8) One (1) aluminum chip charger, with a maximum capacity to charge 2,700 pounds of aluminum chips per hour to RF-5, constructed in 1999, consisting of a pneumatic conveyor handling system, a natural gas-fired heated cyclone for preheating the aluminum chips, with a maximum heat input rate of 1.3 million (MM) British thermal units (Btu) per hour, a charge cyclone, and a charge well to introduce the chips into the furnace RF-5, utilizing a baghouse (BH7) to control particulate emissions, and exhausting through four (4) stacks (S/V ID M1, M2, M3, and BH7).
- (9) one (1) hexachloroethane fluxing operation, with a maximum usage rate of one (1) pound of hexachloroethane flux per ton of metal melted.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Particulate [326 IAC 6-3]

- (a) The particulate emissions from the emission units listed in the table below shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

The allowable emissions for each facility operating at its maximum process weight rate are as follows:

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lb/hr)
Reverberatory Melt Furnace #5 (RF-5)	5.00	12.05
Pouring/Casting (P-3)	79.00*	48.93
Castings Cooling (C-3)	79.00*	48.93
Sand Handling (SH-2)	100.00	51.28
Knockout/Shakeout (SK-3)	79.00*	48.93
Cleaning/Finishing (F-2)	5.00	12.05
Shotblasting (SB-2)	2.50	7.58
Aluminum Chip Charger	1.35	5.01

\* Includes metal, mold sand, and core sand throughput.

- (b) For purposes of demonstrating compliance with the particulate emission limits for the pouring/casting operation (P-3), the castings cooling operation (C-3), sand handling (SH-2), the knockout/shakeout operation (SK-3), and cleaning/finishing (F-2) all exhausting through baghouse CD-3, the allowable particulate emission rate from baghouse CD-3 shall be limited to 210.12 pounds per hour.

#### D.2.2 Particulate Matter (PM) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The PM emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (b) The PM<sub>10</sub> emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (c) The PM emissions from the baghouse (CD-3), controlling PM emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (d) The PM-10 emissions from the baghouse (CD-3), controlling PM-10 emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (e) The PM emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.

- (f) The PM-10 emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.
- (g) The PM emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.
- (h) The PM-10 emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 not applicable.

#### D.2.3 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

- (a) The VOC emissions from the pouring/casting operation (P-3), the castings knockout/shakeout operation (SK-3), and the castings cooling operation (C-3) shall not exceed 1.34 pounds of VOC per ton of metal throughput.
- (b) The throughput of metal to each of the pouring/casting operation (P-3), the castings knockout/shakeout operation (SK-3), and the castings cooling operation (C-3) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The metal throughput limit and the VOC emissions limit yield total VOC emissions from the pouring/casting operation (P-3), the castings knockout/shakeout operation (SK-3), and the castings cooling operation (C-3) that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.

#### D.2.4 Secondary Aluminum NESHAP [40 CFR 63, Subpart RRR]

Reverberatory furnace RF-5 shall only melt clean charge, customer returns, or internal scrap as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

#### D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.

### **Compliance Determination Requirements**

#### D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

During the period within 180 days after issuance of this permit, in order to demonstrate compliance with Conditions D.2.1 and D.2.2, the Permittee shall perform PM and PM-10 testing on the one (1) reverberatory furnace (RF-5), the pouring/casting operation (P-3), the stack exhaust for the baghouse BH7 controlling the aluminum chip charger, and the stack exhaust for baghouse CD-3 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

#### D.2.7 Particulate Matter (PM)

In order to comply with conditions D.2.1 and D.2.2, the baghouses for particulate control identified as CD-3, CD-4, and BH-7 shall be in operation and control emissions from the pouring/casting (P-3), castings cooling (C-3), sand handling (SH-2), knockout/shakeout (SK-3), cleaning/finishing (F-2), and shotblasting (SB-2) operations, and the aluminum chip charger at all times that these facilities are in operation.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.2.8 Visible Emissions Notations**

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- (a) Visible emission notations of the CD-3 and BH7 baghouse stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

### **D.2.9 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each of the baghouses identified as CD-3, controlling the pouring/casting (P-3), castings cooling (C-3), sand handling (SH-2), knockout/shakeout (SK-3), and cleaning/finishing (F-2) operations, CD-4 controlling emissions from and shotblasting (SB-2) operation, and BH7 controlling the one (1) aluminum chip charger, at least once per shift when the systems are in operation. When for any one reading, the pressure drop across any baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.2.10 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the pouring/casting (P-3), castings cooling (C-3), sand handling (SH-2), knockout/shakeout (SK-3), cleaning/finishing (F-2), and shotblasting (SB-2) operations and the aluminum chip charger. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.2.11 Broken or Failed Bag Detection**

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.2.12 Record Keeping Requirements**

- (a) To document compliance with condition D.2.3(c), the Permittee shall maintain records of the monthly throughput of metal to each of the pouring/casting operation (P-3) and the castings knockout/shakeout operation (SK-3). Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain records of visible emission notations of the baghouses CD-3 and BH-7 stack exhausts once per shift.
- (c) To document compliance with Condition D.2.9, the Permittee shall maintain per shift records of the total static pressure drop during normal operation for each baghouse.
- (d) To document compliance with Condition D.2.10, the Permittee shall maintain records of the results of the inspections required under Condition D.2.10.
- (e) To document compliance with Condition D.2.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

##### **D.2.13 Reporting Requirements**

A quarterly summary of the information to document compliance with Condition D.2.3(c) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).



## SECTION D.3

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

#### III. Core Making Facilities

- (1) Eight (8) Isocure cold box core making facilities in 30/30 line, identified as ISO #1 - ISO #8, with ISO #1 - #4 constructed in 1985, ISO #5 - #6 constructed in 1988, and ISO #7 - #8 constructed in 1989, with a total maximum capacity of processing 4.72 tons of cores per hour, 20 pounds of resin per ton of cores, and 2.0 pounds of TEA catalyst per ton of cores, utilizing an amine gas scrubber (SC-1) for TEA emissions control, and exhausting through one (1) stack (S/V ID SC-1); and
- (2) Five (5) Isocure cold box core making facilities in 40/40 line, constructed in 1995, identified as ISO #9 - ISO #13, with a total maximum capacity of processing 2.95 tons of cores per hour, 20 pounds of resin per ton of cores, and 2.0 pounds of TEA catalyst per ton of cores, utilizing an amine gas scrubber (SC-1) for TEA emissions control, and exhausting through one (1) stack (S/V ID SC-1).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.3.1 VOC Emission Limits [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the following conditions shall apply:

- (a) The resin usage for core machines #1 - #4 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #1 - #4 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
- (b) The resin usage for core machines #5 - #6 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #5 - #6 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
- (c) The resin usage for core machines #7 - #8 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #7 - #8 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
- (d) The resin usage for core machines #9 - #13 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #9 - #13 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
- (e) The VOC emissions (not including amine gas (TEA)) from core machines #1 - #4 shall not exceed 0.05 pounds per pound of resin.
- (f) The VOC emissions (not including amine gas (TEA)) from core machines #5 - #6 shall not exceed 0.05 pounds per pound of resin.
- (g) The VOC emissions (not including amine gas (TEA)) from core machines #7 - #8 shall not exceed 0.05 pounds per pound of resin.

- (h) The VOC emissions (not including amine gas (TEA)) from core machines #9 - #13 shall not exceed 0.05 pounds per pound of resin.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.3.2 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.3.1 (a) through (d), the Permittee shall maintain records of the total amine gas catalyst and resin usages for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (b) To document compliance with Conditions D.3.1 (e) through (h), the Permittee shall maintain records of the type of binders used for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13, each month in order to demonstrate that the type of binder used has not changed.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.3.3 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.3.1 (a) through (d) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### **Facility Description [326 IAC 2-7-5(15)]:**

#### **Insignificant Activities:**

- (1) Six (6) thirty-five (35) gallon cold-cleaner parts degreasers; [326 IAC 8-3-2 and 326 IAC 8-3-5] and
- (2) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [326 IAC 6-3-2]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

Pursuant to 326 IAC 8-3-2, the six (6) thirty-five (35) gallon cold-cleaner parts degreasers shall comply with the following:

- (a) Equip each cleaner with a cover;
- (b) Equip each cleaner with a facility for draining cleaned parts;
- (c) Close each degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### **D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]**

Pursuant to 326 IAC 8-3-5, the six (6) thirty-five gallon cold cleaner parts degreasers shall comply with the following requirements:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following control equipment requirements are met:
  - (1) Equip each degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.

- (2) Equip each degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip each degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) \_\_\_\_\_

9 Report (specify) \_\_\_\_\_

9 Notification (specify) \_\_\_\_\_

9 Affidavit (specify) \_\_\_\_\_

9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023

**This form consists of 2 pages**

**Page 1 of 2**

- |   |
|---|
| <p><b>9</b> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li><b>C</b> The Permittee must notify the Office of Air Quality (OAQ), within four <b>(4)</b> business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</li><li><b>C</b> The Permittee must submit notice in writing or by facsimile within two <b>(2)</b> working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</li></ul> |
|---|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023  
Facility: P-1, P-2, SK-1, SK-2, C-1, C-2  
Parameter: metal throughput  
Limit: The total throughput of metal to the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 37,142 tons per twelve (12) consecutive month period. The total throughput of metal to the two (2) castings knockout/shakeout operations (SK-1 and SK-2) shall not exceed 37,142 tons per twelve (12) consecutive month period. The total throughput of metal to the two (2) castings cooling operations (C-1 and C-2) shall not exceed 37,142 tons per twelve (12) consecutive month period.  
YEAR: \_\_\_\_\_

Month	Column 1			Column 2			Column 1 + Column 2		
	Metal Throughput This Month			Metal Throughput Previous 11 Months			Metal Throughput 12 Month Total		
	P-1, P-2	SK-1, SK-2	C-1, C-2	P-1, P-2	SK-1, SK-2	C-1, C-2	P-1, P-2	SK-1, SK-2	C-1, C-2
Month 1									
Month 2									
Month 3									

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023  
Facility: P-3, SK-3, and C-3  
Parameter: metal throughput  
Limit: The throughput of metal to each of the pouring/casting operation (P-3), the castings knockout/shakeout operation (SK-3), and the castings cooling operation (C-3) shall not exceed 37,142 tons per twelve (12) consecutive month period

YEAR: \_\_\_\_\_

Month	Column 1			Column 2			Column 1 + Column 2		
	Metal Throughput This Month			Metal Throughput Previous 11 Months			Metal Throughput 12 Month Total		
	P-3	SK-3	C-3	P-3	SK-3	C-3	P-3	SK-3	C-3
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### Part 70 Quarterly Report

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023  
Facility: Core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13  
Parameter: Resin and amine gas catalyst usage to limit VOC emissions to less than 25 tons/year.  
Limits: (a) The resin usage for core machines #1 - #4 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #1 - #4 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.  
(b) The resin usage for core machines #5 - #6 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #5 - #6 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.  
(c) The resin usage for core machines #7 - #8 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #7 - #8 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.  
(d) The resin usage for core machines #9 - #13 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #9 - #13 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period.  
YEAR: \_\_\_\_\_

Month	Core Machine ID	Column 1		Column 2		Column 1 + Column 2	
		Resin Usage This Month (lbs)	TEA Catalyst Usage This Month (lbs)	Resin Usage for Previous 11 Months (lbs)	TEA Catalyst Usage for Previous 11 Months (lbs)	12 Month Total Resin Usage (lbs)	12 Month Total TEA Catalyst Usage (lbs)
	#1 - #4						
	#5 - #6						
	#7 - #8						
	#9 - #13						
	#1 - #4						
	#5 - #6						
	#7 - #8						
	#9 - #13						
	#1 - #4						
	#5 - #6						
	#7 - #8						
	#9 - #13						

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Mailing Address: 2300 Cardinal Drive, Columbia City, IN 46725  
Part 70 Permit No.: T183-7530-00023

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Addendum to the Technical Support Document for a Part 70 Operating Permit**

Source Name: Fort Wayne Foundry - Columbia City Division  
Source Location: 2300 Cardinal Drive, Columbia City, Indiana 46725  
County: Whitley  
SIC Code: 3365  
Operation Permit No.: T183-7530-00023  
Permit Reviewer: Trish Earls/EVP

On May 14, 2003, the Office of Air Quality (OAQ) had a notice published in the Post & Mail, Columbia City, Indiana, stating that Fort Wayne Foundry - Columbia City Division had applied for a Part 70 Operating Permit to operate a stationary aluminum foundry for the production of aluminum castings. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On June 12, 2003, Kathy Cole of Fort Wayne Foundry - Columbia City Division submitted comments on the proposed permit. A summary of the comments and responses is as follows:

#### **Comment #1**

Condition C.16, Compliance Monitoring Plan - We do not believe that 40 CFR Part 70 or 326 IAC 2-7 provides any authority to require the preparation of a Compliance Response Plan (CRP) or to establish the basis for a violation of the permit for failure to conduct the identified response steps. Failure to take specific response steps should not be interpreted in any way as evidence of non-compliance with an underlying applicable requirement, which is implied by the permit condition. We request that all references to a CRP be eliminated from this condition.

#### **Response #1**

There is sufficient authority for requiring a Compliance Response Plan as part of a Compliance Monitoring Plan. 326 IAC 2-7-5(1) requires that all Title V permits contain operational requirements and limitations that assure compliance with all applicable requirements. 326 IAC 2-7-5(3) requires that all Title V permits contain monitoring and related record keeping requirements which assure that all reasonable information is provided to evaluate continuous compliance with applicable requirements. 326 IAC 2-7-5(3)(A)(ii) requires that, at a minimum, the periodic monitoring requirements must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance, even where the applicable requirement does not require periodic testing or instrumental monitoring.

Furthermore, the Compliance Response Plan (CRP) is part of the overall Compliance Monitoring Plan (CMP). The CMP calls for two types of maintenance: preventive maintenance and corrective maintenance. The OAQ received many comments from the regulated community regarding the previous version of the CMP, which included preventive and corrective maintenance in the same document, the Preventive Maintenance Plan (PMP). These comments requested that the OAQ split the PMP into two plans: one for preventive maintenance and one for corrective maintenance. Therefore, the OAQ responded by splitting the preventive maintenance and the corrective maintenance into the PMP and CRP, respectively. The requirement that the permit contain operational requirements and limitations that assure compliance with all applicable requirements, coupled with the rule requirements for compliance monitoring, provides all the necessary authority for this permit requirement. Therefore, the IDEM disagrees with the position that the CRP be eliminated from condition C.16.

## **Comment #2**

We would like to request several modifications to the requirements included in the proposed permit for the core making facilities in section D.3 of the permit. The specific changes we would like to request include:

- (a) We believe that the descriptions of the core machines are too specific as they relate to the resin usage rates and the amine gas usage rates. Specifically we would request that the resin and amine gas usage rates in the facility descriptions be deleted. We believe that the core tonnage rates are sufficient to describe the process.
- (b) We would request that paragraphs (i), (j), (k) and (l) be removed from condition D.3.1. These conditions set a limit on the amount of amine catalyst gas used per tons of cores. This limit is unnecessary given the annual limits contained in paragraphs (a) through (d) of the proposed permit. The actual rate of usage per tons of cores may in fact fluctuate depending on the specific customer needs, but since we have to maintain records of total amine gas usage, the specific rate does not need to be controlled.
- (c) Paragraphs (e) through (h) of condition D.3.1 include a designation that the amine gas is TEA. The actual amine gas that may be used may include a number of different amine gases, and therefore we would request that the reference to TEA be removed from these four paragraphs.
- (d) The last set of core machines installed in 1995 (machines 9 through 13) were reviewed under the state BACT requirements. The permit (No. CP-183-4432-00023) issued in 1995 included a requirement that the amine gas be controlled by a scrubber with an overall control efficiency of 80%. We believe that this is the appropriate limit for these machines, rather than the resin and amine gas usage limits. That permit also restricted VOC emissions to 39 tons/year such that PSD would not apply. We would request that this limit be removed from the permit because the source is not a major source under PSD, and further, with the 80% control requirement the controlled PTE for these machines would be less than 40 tons/year.
- (e) While we do not believe that the permit should include either a 25 ton/year or the 39 ton/year limit, we would note that the limits in the proposed permit are inconsistent with a 39 ton/year limit. The appropriate limits would be 12-month rolling total limit of 516,840 pounds of resin and 111,429 pounds of amine gas. These usage limits include an assumption of 80% overall control for the amine gas catalyst.
- (f) We do not believe that the recordkeeping requirements contained in section D.3.2(b) provide for an appropriate record to document compliance with the requirements of D.3.1(e) through (h). The VOC content of the resins is not a measure of the emission rate per pound of resin. We would propose the following alternate language for this condition to ensure that resins are used that have emission characteristics similar to those on which the emission limits were based:

*"To document compliance with Condition D.3.1 (e) through (h), the Permittee shall maintain records to demonstrate there has been no change in the type of binder materials used for core machines ISO #1 through ISO #13."*

## **Response #2**

- (a) Although the usage of resin and amine gas catalyst in core machines 1 through 13 are being limited in condition D.3.1 of the Part 70 permit so that VOC emissions are limited to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the OAQ has determined that it is necessary to include the maximum resin and amine gas catalyst usages in their emission unit descriptions. It is necessary to identify the maximum resin and catalyst usages, as provided by the source, because it helps preserve the integrity of the potential emission calculations that were used to determine rule applicability. Another reason to do this is that, although the description is not enforceable, it holds the source to the "maximum" numbers they provided, so that if the source ever starts making cores that require a higher resin or catalyst usage than what was provided at first, it would be obvious to them that they would have to apply for a modification to their permit.

However, instead of expressing the maximum resin and catalyst usages in tons per hour, the maximum usages will be expressed in pounds per ton of cores. The maximum catalyst usage rate in pounds per ton of cores is also necessary to estimate what the core production limit will be, which, in turn is used to calculate the limited resin usage. Also, for reasons stated in paragraph (c) of this response below, the specific amine gas catalyst currently in use at the source, which is TEA, must be identified. The equipment descriptions in section A.2(III)(1) and (2) and D.3 for the coremaking facilities have been revised as follows:

### **A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]**

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This stationary source consists of the following emission units and pollution control devices:

#### **III. Core Making Facilities**

- (1) Eight (8) Isocure cold box core making facilities in 30/30 line, identified as ISO #1 - ISO #8, with ISO #1 - #4 constructed in 1985, ISO #5 - #6 constructed in 1988, and ISO #7 - #8 constructed in 1989, with a total maximum capacity of processing 4.72 tons of cores per hour, ~~0.047 ton of resin per hour~~ **20 pounds of resin per ton of cores**, and ~~0.0047 ton of amine gas catalyst per hour~~ **2.0 pounds of TEA catalyst per ton of cores**, utilizing an amine gas scrubber (SC-1) for ~~amine gas~~ **TEA** emissions control, and exhausting through one (1) stack (S/V ID SC-1); and
- (2) Five (5) Isocure cold box core making facilities in 40/40 line, constructed in 1995, identified as ISO #9 - ISO #13, with a total maximum capacity of processing 2.95 tons of cores per hour, ~~0.03 ton of resin per hour~~ **20 pounds of resin per ton of cores**, and ~~0.003 ton of amine gas catalyst per hour~~ **2.0 pounds of TEA catalyst per ton of cores**, utilizing an amine gas scrubber (SC-1) for ~~amine gas~~ **TEA** emissions control, and exhausting through one (1) stack (S/V ID SC-1).
- (b) Since the maximum resin and catalyst usages in pounds per ton of cores is now being included in the equipment descriptions, it is not necessary to include these usages as limits in a permit condition. Therefore, the limit on catalyst usage rate per ton of cores has been removed from paragraphs (i), (j), (k), and (l) of condition D.3.1. Paragraphs (i), (j), (k), and (l) of condition D.3.1 are removed as follows:



#### D.3.1 VOC Emission Limits [326 IAC 8-1-6]

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In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the following conditions shall apply:

- ~~(i) The amine gas catalyst usage in core machines #1 - #4 shall not exceed 2 pounds per ton of cores.~~
- ~~(j) The amine gas catalyst usage in core machines #5 - #6 shall not exceed 2 pounds per ton of cores.~~
- ~~(k) The amine gas catalyst usage in core machines #7 - #8 shall not exceed 2 pounds per ton of cores.~~
- ~~(l) The amine gas catalyst usage in core machines #9 - #13 shall not exceed 2 pounds per ton of cores.~~
- (c) The U.S. EPA would consider a catalyst switch to be a change in the method of operation, even though emissions in pound per ton would not change. That means a source would have to propose that the new catalyst was more environmentally friendly (e.g. less hazardous) so that a pollution control project (PCP) exemption could be obtained. If a source gets a PCP exemption, it still requires a significant source modification. A PCP just exempts the project from the requirements of 326 IAC 2-2 (PSD). Therefore, the type of catalyst being used must be specified in the permit. Paragraphs (e) through (h) of condition D.3.1 will remain unchanged.
- (d) The original BACT determination in condition 6 of CP-183-4432-00023, issued on September 6, 1995 reads as follows:
  - "6. That pursuant to 326 IAC 8-1-6, the core making, pouring, casting and shakeout processes shall comply with Best Available Control Technology (BACT). BACT shall be considered satisfied provided that based on a 12 month rolling average:
    - a) the amount of poured metal shall be limited to 24,000 tons per year,
    - b) the hours of operation be limited to 6,000 hours per year,
    - c) that VOC emissions be limited to 39 tons per year or less, and
    - d) the TEA scrubber be operated whenever the core machines are operated."

Based on this, it is clear that the 39 ton/yr limit was part of the BACT determination regardless of whether or not it was also used to avoid the PSD requirements at that time. In this case, removing the limit would constitute revising the BACT determination. In order to revise a previous BACT determination, a new BACT analysis must be submitted to IDEM, OAQ for review. Therefore, if the source no longer wishes to accept a VOC emission limit of less than 25 tons per year for these core machines to render 326 IAC 8-1-6 not applicable, they would have to comply with each requirement of the existing BACT determination listed above or apply for a permit modification and submit a new BACT analysis for review as previously mentioned so that a new BACT determination can be made.

- (e) The VOC emission limit of less than 25 tons per year that is currently in the permit for core machines 9 through 13 is a limit that the source initially agreed to during the permit review so that these core machines would not be subject to 326 IAC 8-1-6. The limit must be before controls to render the rule not applicable, therefore, the resin and amine gas (TEA) catalyst usage limits in the draft permit are consistent with a 24.9 tons per year VOC emission limit. The draft permit does not contain a 39 tons per year limit for these core machines since the source limited VOC emissions to less than the 326 IAC 8-1-6 applicability threshold so that the existing BACT determination no longer applies.
- (f) IDEM, OAQ agrees that it is not necessary to keep records of the VOC content of the resins. However, the source must keep records of the type of binders used, in the form of MSDS, to verify that they have not changed. Condition D.3.2 is revised as follows:

#### D.3.2 Record Keeping Requirements

- (a) To document compliance with Conditions D.3.1 (a) through (d), the Permittee shall maintain records of the total amine gas catalyst and resin usages for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13.
- (b) To document compliance with Conditions D.3.1 (e) through (h), the Permittee shall maintain records of the ~~VOC content~~ **type** of the binders used for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13, **each month in order to demonstrate that the type of binder used has not changed.**
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **Comment #3**

Conditions D.1.3 and D.2.3, Volatile Organic Compounds (VOCs) - These conditions each establish VOC emission limits and annual production limits designed to limit total VOC emissions to less than 25 tons/year such that the requirements of 326 IAC 8-1-6 (State BACT) do not apply. We disagree with the underlying assumptions related to the emission factors for VOCs as well as to the necessity for an annual production limit. The emission limits for pouring and shakeout processes were taken from AP-42 for pouring and cooling operations associated with a grey iron foundry. There are substantial differences between a grey iron foundry operation and our Aluminum casting operation. The most notable differences are that we do not use carbon-based additives in our mold sands, whereas greensand systems in grey iron foundries do use organic additives such as seacoal in their mold sand mix. This organic material in the grey iron foundries is a substantial source of VOC emissions that does not exist in our operations. Secondly, we pour Aluminum at a temperature that is much lower than the temperatures associated with iron castings. As such we believe that the driving force for the generation of VOCs is far less in an Aluminum foundry than in a grey iron foundry. Lastly, while there are VOCs generated from the core resin materials used in our casting operations, emissions will be generated from the pouring, cooling and shakeout processes, and not just from pouring and shakeout. The relative proportion of emissions may be much different than reflected in the proposed emission limits.

Since AP-42 does not contain a specific factor for Aluminum Foundries, and since the factor for grey iron will not be representative of our processes, we believe that the state needs to look elsewhere for an estimate of the VOC emissions. The VOC emission factor found in the Modern Castings article by "Moshier" is 0.0234 pounds of VOC per pound resin. This is the same article that the state has used in estimating organic Hazardous Air Pollutant (HAP) emissions from grey iron foundry operations. Using this factor and the overall facility-wide resin usage limit from condition D.3.1, VOC emissions would be limited to 17.7 tons/year as determined from the following calculation:

$$\frac{1,512,840 \text{ pounds resin/year} \times 0.0234 \text{ pounds VOC/ pound resin}}{2000 \text{ pounds/ton}} = 17.7 \text{ tons VOC/year}$$

As such there is clearly no reason to have a metal throughput limit to limit VOC emissions from the pouring, cooling and shakeout processes, since the limitations on resin usage already limit emissions to less than the 25 ton/year threshold level for applicability of 326 IAC 8-1-6.

### **Response #3**

The HAP emission factors from the article by Gary Mosher, in the October, 1994 issue of Modern Casting have been used by the OAQ to calculate organic HAP emissions from pouring, cooling, and shakeout operations at foundries. But the OAQ does not believe it is a good estimate of total VOC emissions. The OAQ would consider the Mosher article VOC emission factor as an alternate emission factor which would have to be verified by stack testing prior to permit issuance. Due to the length of time it requires to submit a test protocol to the OAQ, complete the stack testing, submit the results and have them reviewed and approved by the OAQ, issuance of the Part 70 permit cannot be further postponed until the test results are approved. Therefore, the AP-42 emission factors for pouring and shakeout will be used at this time and the metal throughput limits based on the AP-42 emission factors must remain in the permit. After the Part 70 permit is issued, the source has the option of applying to the OAQ for a permit modification to revise these conditions if valid stack testing does indicate a different VOC emission rate from these operations.

However, condition D.1.3 has been revised so that the VOC emission limit in pound per ton of metal throughput for the two (2) pouring/casting operations (P-1 and P-2) and the two (2) castings knockout/shakeout operations (SK-1 and SK-2) is combined into one limit. Also, since VOC emissions are typically also emitted from cooling, the two (2) casting cooling operations (C-1 and C-2) are included in the limit. Likewise, condition D.2.3 has been revised so that the VOC emission limit in pound per ton of metal throughput for the pouring/casting operation (P-3) and the castings knockout/shakeout operation (SK-3) is combined into one limit and the casting cooling operation (C-3) is included in the limit. The conditions are revised to read as follows:

#### **D.1.3 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]**

- (a) The VOC emissions from the two (2) pouring/casting operations (P-1 and P-2), ~~shall not exceed 0.14 pound per ton of metal throughput.~~
- ~~— (b) The VOC emissions from the two (2) castings knockout/shakeout operations (SK-1 and SK-2), and the two (2) castings cooling operations (C-1 and C-2) shall not exceed 1.2 1.34 pounds of VOC per ton of metal throughput.~~
- (e)(b) The total throughput of metal to the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d)(c) The total throughput of metal to the two (2) castings knockout/shakeout operations (SK-1 and SK-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) **The total throughput of metal to the two (2) castings cooling operations (C-1 and C-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

The metal throughput limit and the VOC emissions limits yield total VOC emissions from the pouring/casting operations (P-1 and P-2), ~~and the castings knockout/shakeout operations (SK-1 and SK-2),~~ **and the two (2) castings cooling operations (C-1 and C-2)** that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.

D.2.3 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

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(a) The VOC emissions from the pouring/casting operation (P-3), ~~shall not exceed 0.14 pound per ton of metal throughput.~~

~~(b)~~ The VOC emissions from the castings knockout/shakeout operation (SK-3), **and the castings cooling operation (C-3)** shall not exceed ~~1.2~~ **1.34** pounds of VOC per ton of metal throughput.

~~(c)~~**(b)** The throughput of metal to each of the pouring/casting operation (P-3), ~~and the castings knockout/shakeout operation (SK-3),~~ **and the castings cooling operation (C-3)** shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The metal throughput limit and the VOC emissions limit yield total VOC emissions from the pouring/casting operation (P-3), ~~and the castings knockout/shakeout operation (SK-3),~~ **and the castings cooling operation (C-3)** that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.

**Comment #4**

Conditions D.1.6 and D.2.6, Testing Requirements - These conditions require that testing for PM<sub>10</sub> emissions include both filterable and condensible PM<sub>10</sub>, which we would interpret as requiring testing to be conducted using EPA methods 201a and 202. We object to the use of Method 202, as it is not specific to condensible PM<sub>10</sub> emissions, and further we do not believe that it can provide an accurate test quantifying the actual emission rate of condensible particulate matter. IDEM's own regulations related to PM<sub>10</sub> emission limitations in Lake County clearly only require testing for filterable PM<sub>10</sub>, and as such these permit requirement are inconsistent with IDEM's regulatory approach even in a PM<sub>10</sub> non-attainment area.

**Response #4**

The EPA recognizes that condensible emissions are also PM<sub>10</sub>, and that emissions that contribute to ambient PM<sub>10</sub> concentrations are the sum of in-stack PM<sub>10</sub>, and condensible emissions. Therefore, for establishing source contributions to ambient concentrations of PM<sub>10</sub> for emission inventory purposes, EPA recommends that source PM<sub>10</sub> measurement include both in-stack PM<sub>10</sub> and condensible emissions. Appendix M of 40 CFR Part 51, which includes recommended test methods for state implementation plans, identifies Method 202 as the method for determining condensible particulate emissions from stationary sources.

Condensible particulate that forms in the atmosphere after leaving the stack is almost always submicron in size. It is safe to assume that condensible particulate could be less than 2.5 microns in size.

With respect to issues such as condensible organic bias, OAQ does not feel there is much chance of that occurring in a Method 202 test. Method 202 does take into account inorganic bias from such compounds as SO<sub>2</sub>, NH<sub>3</sub>, NO<sub>x</sub>, and chlorine which is why a source would either purge or do the ammonia correction in section 2.2 of method 202. If any organics were trapped in the water they would most likely re-vaporize when the sample was taken to dryness for weighing purposes.

Therefore, OAQ supports the position that method 202 is applicable to the facilities referenced in conditions D.1.6 and D.2.6 for measuring condensible particulate matter and is sufficiently accurate to quantify condensible particulate matter. OAQ's inspectors have not seen any evidence of any significant bias caused by organic contamination. The burden of proof is on the source to justify why they think the method is not applicable and to provide additional supporting justification verifying their claim.

#### **Comment #5**

Conditions D.1.9, D.2.8 and D.2.9 - The grinding and shotblast baghouses are relatively small units and they exhaust inside the building. There is no ductwork that would allow them to exhaust outside the building. As such we would request that references to baghouses CD-2 and CD-6 be removed from condition D.1.9, and that reference to baghouses BH-7 be removed from condition D.2.8, and references to baghouses CD-4 and BH-7 be removed from condition D.2.9. We further object to the requirement to perform monitoring each shift. Based on our experience, the resources required to perform the visible emission observations and to take pressure drop records once per shift are not warranted, since problems that may be observed by this monitoring are very rare at our facility. We would request that the monitoring frequency be revised to once per day.

#### **Response #5**

Compliance monitoring is required for baghouse CD-2 controlling the shotblasting operations (SB-1) and for baghouse CD-6 controlling the metal reclamation screening operation because the baghouses are required to comply with the PM and PM-10 emission limits in condition D.1.2 to render the requirements of 326 IAC 2-2 (PSD) not applicable. Therefore, the parametric monitoring requirements in condition D.1.9 for these units will not be removed. Likewise, compliance monitoring is required for the baghouse CD-4 controlling the shotblasting unit (SB-2) and for the baghouse BH-7 controlling the aluminum chip charger because these baghouses are also required to comply with the PSD minor PM and PM10 emission limits in condition D.2.2. Also, baghouse BH-7 is listed as exhausting through four (4) stacks (ID M1, M2, M3, and BH7) indicating that this baghouse does exhaust outside the building. Therefore, reference to baghouse BH-7 in condition D.2.8 and the parametric monitoring requirements for baghouses BH-7 and CD-4 in condition D.2.9 will not be removed from the permit.

Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Baghouse failure can occur suddenly; therefore visible emissions notations and monitoring of baghouse operational parameters should be performed more frequently than daily in such cases where a source operates more than one shift per day. The required frequency of compliance monitoring is once per shift in order to demonstrate continuous compliance unless specified otherwise by an applicable rule. The OAQ believes that visible emissions notations and parametric monitoring once per operating shift are reasonable requirements.

Further, while the nature of a facility's operation may not vary from shift to shift, the personnel at the facility does change from shift to shift. The OAQ believes that all shifts should be in tune with the work practices necessary to ensure continual compliance with permit requirements. The OAQ believes that these work practices should include an understanding and awareness of plant emissions during normal operations. This knowledge and awareness during all shifts can minimize lag time in addressing control failure. Therefore, conditions D.1.9, D.2.8, and D.2.9 will not be revised as a result of this comment.

#### **Comment #6**

Conditions D.1.10 and D.2.10, Baghouse Inspections - Baghouse inspections are required to be addressed in our Preventive Maintenance Plans under separate conditions. The Preventive Maintenance Plans are not to be incorporated into the specific conditions of the permit in order to provide appropriate flexibility as to the frequency and scope of the inspection. Absent a separate and explicit regulatory authority, the permit should not contain a specified frequency or scope for these inspections, but should instead defer to the existing requirements for Preventive Maintenance Plans. We have experienced very reliable baghouse operation that we attribute to good maintenance practices, and we believe those maintenance practices are adequately addressed in our Preventive Maintenance Plan.

#### **Response #6**

Conditions D.1.10 and D.2.10 are required to minimize excess emissions, to the extent feasible, caused by events such as a control device failure. While inspections should also be addressed in the Preventive Maintenance Plan, the OAQ believes that quarterly inspections are necessary to insure proper operation of the baghouses. Therefore, a condition specifically requiring the quarterly inspections is included in the permit. This is authorized under 326 IAC 2-7-5(3) and 326 IAC 2-7-6.

#### **Comment #7**

Conditions D.1.11 and D.2.11, Broken or Failed Bag Detection - The Emergency provisions of the permit provide a proper framework to address failed emission control equipment. This condition establishes a potential separate violation without even a reference to an underlying applicable requirement. The inclusion of a separate requirement to shutdown an emission unit without such an underlying regulatory basis is an illegal exercise of IDEM's authority. Conditions requiring shutdown of control equipment during emergency conditions are specifically covered by condition B.13, Emergency Provisions. Considering that the Emergency Provisions are applicable source wide for any type of control equipment, and have been included as a specific B section, we request that conditions D.1.11, D.2.11 be removed from the permit.

#### **Response #7**

Pursuant to 326 IAC 2-7-5(1)(F), each Part 70 permit is required to contain conditions which minimize excess emissions, to the extent feasible, caused by events such as a bag failure. The requirements shall take into consideration available technologies, safety cost, and other relevant factors. The OAQ does not consider shutting down the baghouses and associated production equipment to be infeasible in this case.

A bag failure may qualify as an "emergency" as defined in condition B.13 for purposes of an affirmative defense against a violation of the specific permit condition. However, once the bag failure is observed, continuing to operate the equipment and venting uncontrolled particulate matter to the atmosphere may not be considered an attempt by the permittee to take all reasonable steps to minimize levels of emissions that exceed an emission standard or other requirement in the permit.

Therefore, the OAQ believes that the requirement to shutdown the affected compartments is a reasonable action to ensure compliance with the particulate matter limitations. Also, applicability of the emergency provisions of 326 IAC 2-7-16 will be determined on a fact specific basis if necessary. No revisions were made to the permit as a result of this comment.

### **Comment #8**

Part 70 Quarterly Report - The report form for metal throughput for the pouring and shakeout processes should be removed, since as noted above the limit is not necessary to limit emissions to less than 25 tons/year from these processes. If the limit and report form remain in the permit, we would request that the form be simplified to include a single reporting value for pouring and shakeout processes. It is in fact the same value for each process since the metal poured on lines 1 and 2 is the metal that is involved in the shakeout process as well.

### **Response #8**

As stated in Response #3 above, the AP-42 emission factors for VOC emissions from pouring and shakeout must be used at this time and the metal throughput limits based on the AP-42 emission factors must also remain in the permit. After the Part 70 permit is issued, the source has the option of applying to the OAQ for a permit modification to revise these conditions if valid stack testing does indicate a different VOC emission rate from these operations which would allow the metal throughput limits to be removed.

Since the throughput limit is expressed in terms of the metal throughput to each of the pouring and shakeout operations, and now the cooling operations, the report form should show the metal throughput to each of these operations. If the value is the same for each operation, this value can just be entered in each column. No changes were made to the report form.

### **Comment #9**

Appendix A, Emission Calculations - Page 14 of Appendix A contains emission estimates for fluxing operations. The estimates of VOC, HCl and HF emissions were based on test results from a different facility, and as such we do not necessarily concur with the estimates or the conclusion that we are a major source of Hazardous Air Pollutants based on HCL emission estimates. We believe that the conclusion is speculative and that the record should reflect this. We would also note that the correct factor for HF emissions from the cited source test is 0.003 pounds per pound of organic flux.

### **Response #9**

The emission factors for HCl and HF were based on stack test results of furnace emissions when using organic flux at another aluminum foundry (General Motors, Bedford, IN), that also performed a minimal amount of fluxing, which was performed in December, 2001. These factors were accepted by the OAQ to estimate emissions from the fluxing operation at Fort Wayne Foundry. However, they are not based on specific test results for this source. If these test results were not used, the OAQ would have to assume that all the chlorine in the flux material is emitted in some form (HCl, hexachloroethane, etc). Therefore, based on this assumption and a maximum organic flux usage rate of 1 pound per ton of metal melted or 13 pounds per hour or 113,880 pounds per year, potential HCl and hexachloroethane emissions would be 56.9 tons per year. This methodology would also indicate that this source is a major source of HAPs. Again, the source has the option of applying to the OAQ for a permit modification to revise the emission estimates for the fluxing operation if valid stack testing does indicate a different HCl or hexachloroethane emission rate from the fluxing operation. Note also that this source is already a major source of HAPs since the potential to emit of TEA from the coremaking operation, taking into account the limited TEA usage rate to limit VOC emissions, is greater than 10 tons per year. Since the wet scrubber controlling TEA emissions is not specifically required to be used in the permit, the potential to emit of TEA is calculated before control.

The emission factor for HF emissions of 0.009 pound per pound of organic flux is correct based on the stack test results on file at the OAQ for the General Motors, Bedford, IN plant.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. On March 3, 2003, U.S.EPA published a notice for "Conditional Approval of Implementation Plan: Indiana" in the Federal Register / Vol. 68, No.41 at pages 9892 through 9895. This notice grants conditional approval to the PSD State Implementation Plan (SIP) under provisions of 40 CFR §51.166 and 40 CFR §52.770 while superceding the delegated PSD SIP authority under 40 CFR §52.793. The effective date for these provisions is April 2, 2003. Therefore, the PSD permits will be issued under the authority of 326 IAC 2-2 and will no longer be issued under the provision of 40 CFR 52.21 and 40 CFR 124. Because of this, conditions D.1.2 and D.2.2, which contain limits that render the requirements of 326 IAC 2-2 (PSD) not applicable, have been revised based on the PSD SIP approval status (where language deleted is shown with strikeout):

**D.1.2 Particulate Matter (PM) [326 IAC 2-2]~~[40 CFR 52.21]~~**

In order to render the requirements of 326 IAC 2-2 (PSD) ~~and 40 CFR 52.21~~ not applicable, the following conditions shall apply:

- (a) The total PM emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.
- (b) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.
- (c) The total PM emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (d) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (e) The PM emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (f) The PM-10 emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (g) The PM emissions from the baghouse (CD-1), controlling PM emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (h) The PM-10 emissions from the baghouse (CD-1), controlling PM-10 emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (i) The PM emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.



- (j) The PM10 emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.
- (k) The PM emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (l) The PM10 emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (m) The PM emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.
- (n) The PM10 emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 and ~~40 CFR 52.21~~ not applicable.

**D.2.2 Particulate Matter (PM) [326 IAC 2-2][~~40 CFR 52.21~~]**

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In order to render the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.21~~ not applicable, the following conditions shall apply:

- (a) The PM emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (b) The PM10 emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (c) The PM emissions from the baghouse (CD-3), controlling PM emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (d) The PM-10 emissions from the baghouse (CD-3), controlling PM-10 emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (e) The PM emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.
- (f) The PM-10 emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.
- (g) The PM emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.
- (h) The PM-10 emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 and ~~40 CFR 52.24~~ not applicable.

2. The following updates have been made to the table of contents of the Part 70 permit in order to be complete, clear, and correct.

- A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][**326 IAC 2-7-1(22)**]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
**[326 IAC 2-7-5(15)]**
- A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
**[326 IAC 2-7-5(15)]**
- B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3)and (13)][326 IAC 2-7-6(1)and(6)]  
**[326 IAC 1-6-3]**
- B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
**[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**
- B.19 Permit Revision Under Economic Incentives and Other Programs **[326 IAC 2-7-5(8)]**  
**[326 IAC 2-7-12 (b)(2)]**
- C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates **Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]**
- C.12 Monitoring Methods [326 IAC 3][**40 CFR 60][40 CFR 63]**
- C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] **[326 IAC 2-7-5(3)]**  
**[326 IAC 2-7-6(1)]**
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports **[326 IAC 2-7-5] [326 IAC 2-7-6]**
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
**[326 IAC 2-7-6]**
- C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
**[326 IAC 2-6]**

3. The duty to supplement an application is not an ongoing requirement after the permit is issued; therefore, (a) has been removed from condition B.7, Duty to Supplement and Provide Information.

- B.7 Duty to Supplement and Provide Information ~~[326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]~~  
~~[326 IAC 2-7-6(6)]~~

~~(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:~~

~~\_\_\_\_\_ Indiana Department of Environmental Management  
\_\_\_\_\_ Permits Branch, Office of Air Quality  
\_\_\_\_\_ 100 North Senate Avenue, P. O. Box 6015  
\_\_\_\_\_ Indianapolis, Indiana 46206-6015~~

~~\_\_\_\_\_ The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

- (b)(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (e)(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.
4. Condition B.11 (b) was revised to clarify that required record keeping needs to be implemented as well as the rest of the plan to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit. Also, (c) has been revised to clarify that OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The requirements to keep records of preventive maintenance in (d) has been moved to Section D. Because the general record keeping requirements (i.e. retained for 5 years) are in Section C, it is not necessary to include them in this condition or in the section D condition. At some sources, an OMM Plan is required. Instead of having two separate plans, the OMM Plan may satisfy the PMP requirements, so (d) has been added to this condition.
- B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
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- (b) The Permittee shall implement the PMPs, **including any required record keeping**, as necessary to ensure that failure to implement a PMP does not cause or contribute to ~~a violation~~ **an exceedance** of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or ~~contributes to any violation~~ **is the primary contributor to an exceedance of any limitation on emissions or potential to emit**. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- ~~(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~
- (d) **To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.**
5. In order to clarify that an amendment or modification will not be required for the addition, operation or removal of a nonroad engine, paragraph (d) has been added to condition B.18 Permit Amendment or Modification.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) **No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.**

6. For clarity, additional rule cites have been added to condition B.22, Inspection and Entry.

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2][IC 13-30-3-1][IC 13-30-3-2]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) **As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have** ~~Have~~ access to and copy any records that must be kept under the conditions of this permit;
- (c) **As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect** ~~inspect~~ any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) **As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample** ~~Sample~~ or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) **As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize** ~~Utilize~~ any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

7. The following change has been made to condition C.1, Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) Pounds Per Hour:

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

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- (a) Pursuant to 40 CFR 52 Subpart P, ~~the allowable~~ particulate matter emissions ~~rate~~ from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), ~~the allowable~~ particulate emissions ~~rate~~ from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

8. Condition C.8, Asbestos Abatement Projects, has been revised to clarify that the requirement to have an Indiana Accredited Asbestos inspector is not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
  - (f) **Demolition and renovation**  
**The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).**
  - ~~(f)~~(g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. ~~The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.~~
9. Condition C.15, Risk Management Plan, has been revised so that it is more straightforward, and the condition requires the source to comply with the applicable requirements of 40 CFR 68 if a regulated substance is present at a source in more than a threshold quantity.
- C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]
- 
- If a regulated substance, ~~subject to~~ **as defined in** 40 CFR 68, is present at a source in more than a threshold quantity, ~~40 CFR 68 is an applicable requirement and the Permittee shall submit:~~ **the source must comply with the applicable requirements of 40 CFR 68.**
- ~~(a)~~ ~~A compliance schedule for meeting the requirements of 40 CFR 68; or~~
  - ~~(b)~~ ~~As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP);~~
  - ~~All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

10. Failure to take reasonable response steps shall be considered a deviation from the permit; therefore, paragraph (b)(4) of condition C.16 was revised. Language was added to (e) to clarify that the records that need to be kept are those instances when, in accordance with Section D, response steps are taken.
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]
- 
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
- (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
- (4) Failure to take reasonable response steps shall ~~constitute a violation of~~ **be considered a deviation from** the permit.
- (e) The Permittee shall record all instances when, **in accordance with Section D**, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
11. In order to clarify which documents need to be certified by the responsible official, the following update has been made:
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]
- 
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The **response action** documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

12. Condition C.18 (a), Emission Statement, has been updated to include the specific rule cite that defines the regulated pollutants being referred to in this condition.

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]

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- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate estimated actual emissions of ~~other~~ regulated pollutants (as defined by 326 IAC 2-7-1(32)) ("**Regulated pollutant which is used only for purposes of Section 19 of this rule**") from the source, for purposes of Part 70 fee assessment.

13. It is acceptable for records to be electronically accessible instead of being physically present at a source; therefore, the following update has been made:

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

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- (a) Records of all required **monitoring** data, reports and support information **required by this permit** shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be **kept physically present or electronically accessible** at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

14. A requirement has been added to conditions D.1.12 and D.2.12 to require records of inspections prescribed by the Preventive Maintenance Plan to be maintained since the requirement has been removed from condition B.11. Also, language was added to these conditions and to condition D.3.2 to clarify that the Permittee has 30 days to demonstrate compliance with the limit.



#### D.1.12 Record Keeping Requirements

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- (a) To document compliance with condition D.1.3(c) and (d), the Permittee shall maintain records of the monthly throughput of metal to each of the pouring/casting operations (P-1 and P-2) and to each of the castings knockout/shakeout operations (SK-1 and SK-2). **Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain records of visible emission notations of the baghouse CD-1 stack exhaust once per shift.
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain per shift records of the total static pressure drop during normal operation for each baghouse.
- (d) To document compliance with Condition D.1.10, the Permittee shall maintain records of the results of the inspections required under Condition D.1.10.
- (e) **To document compliance with Condition D.1.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.**
- ~~(e)~~(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.12 Record Keeping Requirements

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- (a) To document compliance with condition D.2.3(c), the Permittee shall maintain records of the monthly throughput of metal to each of the pouring/casting operation (P-3) and the castings knockout/shakeout operation (SK-3). **Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain records of visible emission notations of the baghouses CD-3 and BH-7 stack exhausts once per shift.
- (c) To document compliance with Condition D.2.9, the Permittee shall maintain per shift records of the total static pressure drop during normal operation for each baghouse.
- (d) To document compliance with Condition D.2.10, the Permittee shall maintain records of the results of the inspections required under Condition D.2.10.
- (e) **To document compliance with Condition D.2.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.**
- ~~(e)~~(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.2 Record Keeping Requirements

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- (a) To document compliance with Conditions D.3.1 (a) through (d), the Permittee shall maintain records of the total amine gas catalyst and resin usages for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13.  
**Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**
- (b) To document compliance with Conditions D.3.1 (e) through (h), the Permittee shall maintain records of the VOC content of the binders used for core machines #1 - #4, core machines #5 - #6, core machines #7 - #8, and core machines #9 - #13.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

15. The quarterly inspections should not occur in consecutive months. Therefore, conditions D.1.10 and D.2.10 have been revised as follows:

#### D.1.10 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the castings cooling (C-1,C-2), sand handling (SH-1), knockout/shakeout (SK-1,SK-2), cleaning/finishing (F-1), and shotblasting (SB-1) operations and metal reclamation screening operation. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

#### D.2.10 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the pouring/casting (P-3), castings cooling (C-3), sand handling (SH-2), knockout/shakeout (SK-3), cleaning/finishing (F-2), and shotblasting (SB-2) operations and the aluminum chip charger. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

## **Indiana Department of Environmental Management Office of Air Quality**

### Technical Support Document (TSD) for a Part 70 Operating Permit

#### **Source Background and Description**

**Source Name:** Fort Wayne Foundry - Columbia City Division  
**Source Location:** 2300 Cardinal Drive, Columbia City, IN 46725  
**County:** Whitley  
**SIC Code:** 3365  
**Operation Permit No.:** T183-7530-00023  
**Permit Reviewer:** Trish Earls/EVP

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Fort Wayne Foundry - Columbia City Division relating to the operation of a stationary aluminum foundry for the production of aluminum castings.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- I. The following equipment is part of the 30/30 line and was constructed in 1986:

##### **Foundry Operations**

- (1) Four (4) natural gas-fired reverberatory melt furnaces identified as RF-1, RF-2, RF-3, and RF-4, each rated at 8.25 million (mm) British thermal units (Btu) per hour, and each with a maximum capacity of melting 2.0 tons of aluminum per hour, RF-1 and RF-2 exhausting through one (1) stack (S/V ID S-1) and RF-3 and RF-4 exhausting through one (1) stack (S/V ID S-2);
- (2) One (1) sand handling system, identified as SH-1, with a maximum capacity of handling 130 tons of sand per hour, utilizing a baghouse (CD-1) for particulate matter control and exhausting through one (1) stack (S/V ID CD-1);
- (3) Two (2) pouring/casting operations identified as P-1 and P-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, exhausting uncontrolled inside the plant;
- (4) Two (2) castings cooling operations identified as C-1 and C-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);

- (5) Two (2) castings knockout/shakeout operations identified as SK-1 and SK-2, each with a maximum capacity of processing 4.0 tons of metal per hour, 2.36 tons of core sand per hour, and 55 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-1), and exhausting through one (1) stack (S/V ID CD-1);
- (6) One (1) cleaning/finishing operation, identified as F-1, which includes the use of seven (7) belt grinders and one (1) cut off wheel with a maximum capacity of finishing eight (8) tons of unfinished metal per hour, utilizing a baghouse (CD-5) for particulate matter control and exhausting inside the plant;
- (7) One (1) shotblasting unit, identified as SB-1, with a maximum capacity of blasting four (4) tons of metal castings per hour, utilizing a baghouse (CD-2) for particulate matter control, and exhausting inside the plant;
- (8) One (1) metal reclamation screening operation, consisting of two (2) waste sand metal reclamation screens, with a maximum sand throughput of 12 tons per hour, utilizing a baghouse (CD-6) for particulate matter control, and exhausting inside the plant; and
- (9) one (1) hexachloroethane fluxing operation, with a maximum usage rate of one (1) pound of hexachloroethane flux per ton of metal melted.

Note: The hexachloroethane fluxing operation is used in both the 30/30 line and the 40/40 line.

II. The following equipment is part of the 40/40 line and was constructed in 1995:

#### Foundry Operations

- (1) One (1) natural gas-fired reverberatory melt system rated at 25 million (MM) British thermal units (Btu) per hour, identified as RF-5, with a maximum capacity of melting 5.0 tons of aluminum per hour, exhausting through one (1) stack (S-3);
- (2) One (1) sand handling system identified as SH-2, with a maximum capacity of handling 100 tons of sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (3) One (1) pouring/casting operation identified as P-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (4) One (1) castings cooling operation identified as C-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse for particulate matter control (CD-3), and exhausting through one (1) stack (S/V ID CD-3);
- (5) One (1) castings knockout/shakeout operation identified as SK-3, with a maximum capacity of processing 5.0 tons per hour of metal, 2.95 tons of core sand per hour, and 71 tons of mold sand per hour, utilizing a baghouse (CD-3) for particulate matter control, and exhausting through one (1) stack (S/V ID CD-3);
- (6) Cleaning/finishing operations identified as F-2, which includes the use of trim presses, cutoff saws, and hand-held deburring tools, with a maximum capacity of finishing 5.0 tons of unfinished metal per hour, utilizing a baghouse (CD-3) for particulate matter control and exhausting through one (1) stack (S/V ID CD-3);

- (7) One (1) shotblasting unit, identified as SB-2, with a maximum capacity of blasting 2.5 tons of metal per hour, utilizing a baghouse (CD-4) for particulate matter control, and exhausting inside the plant; and
- (8) One (1) aluminum chip charger, with a maximum capacity to charge 2,700 pounds of aluminum chips per hour to RF-5, constructed in 1999, consisting of a pneumatic conveyor handling system, a natural gas-fired heated cyclone for preheating the aluminum chips, with a maximum heat input rate of 1.3 million (MM) British thermal units (Btu) per hour, a charge cyclone, and a charge well to introduce the chips into the furnace RF-5, utilizing a baghouse (BH7) to control particulate emissions, and exhausting through four (4) stacks (S/V ID M1, M2, M3, and BH7).

### III. Core Making Facilities

- (1) Four (4) Isocure cold box core making facilities in 30/30 line, constructed in 1985, identified as ISO #1- ISO #4, with a total maximum capacity of processing 4.72 tons of cores per hour, 0.047 ton of resin per hour and 0.0047 ton of amine gas catalyst per hour, utilizing an amine gas scrubber (SC-1) for amine gas emissions control, and exhausting through one (1) stack (S/V ID SC-1); and

Note: The total core production capacity listed above also includes the additional four (4) Isocure cold box core making facilities in 30/30 line, identified as ISO #5 - ISO #8 listed under the unpermitted units section.

- (2) Five (5) Isocure cold box core making facilities in 40/40 line, constructed in 1995, identified as ISO # 9 - ISO #13, with a total maximum capacity of processing 2.95 tons of cores per hour, 0.03 ton of resin per hour and 0.003 ton of amine gas catalyst per hour, utilizing an amine gas scrubber (SC-1) for amine gas emissions control, and exhausting through one (1) stack (S/V ID SC-1).

### Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

Four (4) Isocure cold box core making facilities in 30/30 line, identified as ISO #5 - ISO #8, with ISO #5 and #6 constructed in 1988 and ISO #7 and #8 constructed in 1989, with a total maximum capacity of processing 4.72 tons of cores per hour, 0.047 ton of resin per hour and 0.0047 ton of amine gas catalyst per hour, utilizing an amine gas scrubber (SC-1) for amine gas emissions control, and exhausting through one (1) stack (S/V ID SC-1).

Note: The total core production capacity listed above also includes the additional four (4) Isocure cold box making facilities in 30/30 line, constructed in 1985, identified as ISO #1 - ISO #4 listed under the permitted units section.

### Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
  - (a) one (1) air make-up unit rated at 8.8 mmBtu per hour; and
  - (b) one (1) air make-up unit rated at 2.0 mmBtu per hour.
- (2) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (3) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

- (4) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (5) Refractory storage not requiring air pollution control equipment.
- (6) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (7) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (8) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
  - (a) Six (6) thirty-five (35) gallon cold-cleaner parts degreasers.
- (9) Cleaners and solvents characterized as follows:
  - (a) having a vapor pressure equal to or less than 2kPa, 15 mm HG, or 0.3 psi measured at 38 degrees Celsius (100 F) or;
  - (b) having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20 degrees Celsius (68 F), the use of which for all cleaners and solvents combined not exceed 145 gallons per 12 months.
- (10) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (11) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (12) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.
- (13) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (14) Paved and unpaved roads and parking lots with public access.
- (15) Enclosed sand conveyors.
- (16) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (17) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (18) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (19) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees Celsius).
- (20) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (21) Other activities with emissions less than insignificant thresholds including the following:
  - (a) one (1) Hotbox coremaking machine emitting less than 25 pounds of PM per day and 15 pounds of VOC per day, and exhausting through one (1) stack (S/V ID SM-1);
  - (b) 40/40 line clay bond storage bin (vented inside the building);
  - (c) 40/40 line waste sand surge bin (vented inside the building);
  - (d) 30/30 line bonded tank (vented inside the building);
  - (e) waste sand storage silo with 2000 acfm exhaust fan (vented inside the building); and
  - (f) core adhesive/resins usage containing no VOC.

### Existing Approvals

The source has constructed or has been operating under the following previous approvals:

- (a) Registration letter issued June 14, 1985;
- (b) CP-183-4432-00023, issued September 6, 1995; and
- (c) Minor Source Modification 183-11002-00023, issued August 4, 1999.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this Part 70 permit:

- (a) CP 183-4432-00023, issued on September 6, 1995

Operation Conditions:

Condition 6.a the amount of poured metal shall be limited to 24,000 tons per year,

Condition 6.b the hours of operation be limited to 6000 hours per year,

Condition 11 These reports shall include a 12 month rolling average of metal poured, hours of operation and tons of VOC calculated on a monthly basis.

Reason not incorporated: The above listed conditions were specified in the previously issued construction permit (CP183-4432-00023, issued September 6, 1995) to limit the potential to emit VOC from the core making, pouring, casting, and shakeout operations in the 40/40 line to 39 tons per year to comply with BACT requirements of 326 IAC 8-1-6. However, since core making is considered a separate facility from the pouring/casting and knockout/shakeout operations, the source will now limit VOC emissions from the core making operations in the 40/40 line to less than 25 tons per year and will limit VOC emissions from pouring/casting and castings knockout/shakeout to less than 25 tons per year to render 326 IAC 8-1-6 not applicable. To do this, the source will limit resin and amine gas catalyst usage in the core making operation and will limit the metal throughput to the pouring/casting and knockout/shakeout operations in the 40/40 line to 37,142 tons per year.

The construction permit also stated that the VOC limit of 39 tons per year would make the requirements of 326 IAC 2-2 (PSD) not applicable. However, VOC limits are no longer necessary to render the PSD requirements not applicable. This is because at the time that this construction permit was issued, the source was considered 1 of the 28 listed source categories under PSD so that the PSD threshold was 100 tons per year for a modification to an existing minor PSD source. Since potential VOC emissions were greater than 100 tons per year, the limits were stated to render PSD not applicable. However, since this source is no longer considered 1 of the 28 listed source categories, the PSD threshold is 250 tons/yr. Since potential VOC emissions are less than 250 tons per year, a VOC limit is not necessary to avoid PSD.

- (b) CP 183-4432-00023, issued on September 6, 1995

Operation Conditions:

Condition 7 That particulate matter emissions from the baghouses shall be limited as follows:

- a) Unit 700, 0.0075 gr/dscf for a flow rate of 60,000 acfm
- b) Unit 703, 0.0075 gr/dscf for a flow rate of 6,000 acfm

Reason not incorporated: These conditions contain the design operating parameters of the baghouses. These limits were included to render the requirements of 326 IAC 2-2 (PSD) not applicable. The Title V permit will contain specific pound per hour particulate emission limits for each of the baghouses controlling particulate matter emissions from the 40/40 line to render the requirements of 326 IAC 2-2 (PSD) not applicable, therefore, these limits are no longer necessary.

- (c) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

### Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on December 12, 1996.

A notice of completeness letter was mailed to the source on January 17, 1997.

This Part 70 permit contains provisions intended to satisfy the requirements of the construction permit rules.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 14).

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.



Pollutant	Potential To Emit (tons/year)
PM	greater than 250
PM-10	greater than 250
SO <sub>2</sub>	less than 100
VOC	greater than 100, less than 250
CO	less than 100
NO <sub>x</sub>	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Benzene	negligible
Dichlorobenzene	negligible
Formaldehyde	less than 10
Hexane	less than 10
Toluene	negligible
Lead	negligible
Cadmium	negligible
Chromium	negligible
Manganese	negligible
Nickel	negligible
Triethylamine (TEA)	greater than 25
HCl	greater than 25
HF	less than 10
Hexachloroethane	greater than 10
TOTAL	greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM10 and VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM-10	35
SO <sub>2</sub>	1
VOC	26
CO	13
NO <sub>x</sub>	16
HAP (specify)	not reported

### Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
<b>30/30 line</b>							
Reverberatory melt furnaces (RF-1 and RF-2) <sup>(1)</sup>	17.52	17.52	0.04	3.90	6.07	7.23	0.14
Reverberatory melt furnaces (RF-3 and RF-4) <sup>(1)</sup>	17.52	17.52	0.04	3.90	6.07	7.23	0.14
Pouring/Casting (P-1, P-2) <sup>(1)(2)</sup>	17.52	17.52	0.37	24.9	--	0.19	--
Castings Cooling (C-1, C-2), Sand Handling (SH-1), and Castings Knockout/Shakeout (SK-1, SK-2) <sup>(2)(3)</sup>	56.31	56.31	--		--	--	--
Cleaning/Finishing (F-1) <sup>(4)</sup>	9.01	9.01	--	--	--	--	--
Shotblasting (SB-1) <sup>(4)</sup>	9.01	9.01	--	--	--	--	--
Metal Reclamation Screening <sup>(4)</sup>	6.76	6.76					
Hexachloroethane Fluxing <sup>(5)</sup>	--	--	--	23.35	--	--	51.76
<b>40/40 line</b>							
Reverberatory melt system (RF-5) <sup>(1)</sup>	21.90	21.90	0.07	4.98	9.20	10.95	0.21
Pouring/Casting (P-3), Castings Cooling (C-3), Sand Handling (SH-2), Castings Knockout/Shakeout (SK-3), and Cleaning/Finishing (F-2) <sup>(6)(7)</sup>	67.58	67.58	0.37	24.9	--	0.19	--
Shot Blasting (SB-2) <sup>(8)</sup>	6.76	6.76	--	--	--	--	--
Aluminum chip charger <sup>(8)</sup>	4.05	4.05	--	1.18	--	--	--

Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Heated Cyclone for chip charger	0.01	0.04	0.0	0.03	0.48	0.57	0.01
<b>Coremaking Facilities</b>							
Isocure cold box (ISO #1 - #4) <sup>(9)</sup>	--	--	--	24.90	--	--	16.60
Isocure cold box (ISO #5 - #6) <sup>(9)</sup>	--	--	--	24.90	--	--	16.60
Isocure cold box (ISO #7 - #8) <sup>(9)</sup>	--	--	--	24.90	--	--	16.60
Isocure cold box (ISO #9 - #13) <sup>(10)</sup>	--	--	--	24.90	--	--	16.60
<b>Insignificant Activities</b>							
Natural Gas Combustion	0.09	0.36	0.03	0.26	3.97	4.73	0.09
<b>Total Emissions</b>	<b>234.04</b>	<b>234.34</b>	<b>0.92</b>	<b>187.00</b>	<b>25.79</b>	<b>31.09</b>	<b>118.75</b>

- (1) Emissions from reverberatory furnaces and PM and PM10 emissions from Pouring/Casting (P-1, P-2) represent potential uncontrolled emissions. Potential PM emissions are less than the allowable emissions pursuant to 326 IAC 6-3-2.
- (2) Pouring/Casting (P-1, P-2) and Castings Knockout/Shakeout (SK-1, SK-2) VOC, SO<sub>2</sub>, and NO<sub>x</sub> emissions represent emissions after a metal throughput limit of 37,142 tons per year to limit VOC emissions from Pouring/Casting and Castings Knockout/Shakeout to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.
- (3) PM and PM-10 emissions from Castings Cooling (C-1, C-2), Sand Handling (SH-1), and Castings Knockout/Shakeout (SK-1, SK-2) represent the total maximum allowable PM and PM-10 emissions to render 326 IAC 2-2 (PSD) not applicable.
- (4) PM and PM-10 emissions from Cleaning/Finishing (F-1), Shotblasting (SB-1), and Metal Reclamation Screening each represent the maximum allowable PM and PM-10 emissions to render 326 IAC 2-2 (PSD) not applicable.
- (5) HAP emissions from hexachloroethane fluxing operation are comprised of HCl, HF, and hexachloroethane. HCl and HF are not VOCs.
- (6) PM and PM-10 emissions from Pouring/Casting (P-3), Castings Cooling (C-3), Sand Handling (SH-2), Castings Knockout/Shakeout (SK-3), and Cleaning/Finishing (F-2) represent the maximum allowable PM and PM-10 emissions to render 326 IAC 2-2 (PSD) not applicable.
- (7) Pouring/Casting (P-3) and Castings Knockout/Shakeout (SK-3) VOC, SO<sub>2</sub>, and NO<sub>x</sub> emissions represent emissions after a metal throughput limit of 37,142 tons per year to limit VOC emissions from Pouring/Casting and Castings Knockout/Shakeout to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.
- (8) PM and PM-10 emissions from Shotblasting (SB-2) and the Aluminum Chip Charger represent the maximum allowable PM and PM-10 emissions to render 326 IAC 2-2 (PSD) not applicable.
- (9) Emissions from the Isocure cold box core machines #1 - #4, #5 - #6, and #7 - #8 will be limited to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.
- (10) Emissions from the Isocure cold box core machines #9 - #13 will be limited to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.

### County Attainment Status

The source is located in Whitley County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Whitley County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Whitley County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

#### **Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

#### **Federal Rule Applicability**

- (a) This source is not subject to the requirements of the New Source Performance Standard (NSPS), 326 IAC 12, 40 CFR 60.191, Subpart S (Primary Aluminum Reduction), because the source does not perform primary aluminum reduction as defined in 40 CFR 60.191. This source is an aluminum foundry plant, therefore the requirements under 326 IAC 12, (40 CFR 60.191, Subpart S) do not apply.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63.1500 through 63.1519, Subpart RRR, because this source is not a secondary aluminum production facility as defined in 40 CFR 63.1503. Pursuant to 40 CFR 63.1503, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source only melts clean charge, customer returns, or internal scrap and does not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. The aluminum chip charger is not used to dry aluminum chips and is only used for chip handling and charging to the reverberatory furnace identified as RF-5. It is not a thermal chip dryer as defined in 40 CFR 63.1503. Therefore, this source is not subject to this rule.

Note: This non-applicability determination is based on the final rule as published in the December 30, 2002 Federal Register.

### **State Rule Applicability - Entire Source**

#### **326 IAC 1-5-2 (Emergency Reduction Plans)**

The source has submitted an Emergency Reduction Plan (ERP) on December 12, 1996. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

#### **326 IAC 2-2 (Prevention of Significant Deterioration)**

This existing stationary aluminum foundry, is not one of the 28 listed source categories, and not subject to the requirements of this rule based on the following:

##### **Foundry Operations - 30/30 Line**

- (a) The total PM emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.
- (b) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-1 and RF-2), both of which exhaust through stack ID S-1, shall not exceed 4.0 pounds per hour.
- (c) The total PM emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (d) The total PM-10 emissions from the two (2) reverberatory furnaces (RF-3 and RF-4), both of which exhaust through stack ID S-2, shall not exceed 4.0 pounds per hour.
- (e) The PM emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (f) The PM-10 emissions from each of the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 2.0 pounds per hour.
- (g) The PM emissions from the baghouse (CD-1), controlling PM emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (h) The PM-10 emissions from the baghouse (CD-1), controlling PM-10 emissions from the two (2) castings cooling operations (C-1 and C-2), the one (1) sand handling system (SH-1), and the two (2) castings knockout/shakeout operations (SK-1 and SK-2), shall not exceed 12.86 pounds per hour.
- (i) The PM emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.
- (j) The PM10 emissions from the one (1) cleaning/finishing operation (F-1) shall not exceed 2.06 pounds per hour.
- (k) The PM emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (l) The PM10 emissions from the one (1) shotblasting unit (SB-1) shall not exceed 2.06 pounds per hour.
- (m) The PM emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.
- (n) The PM10 emissions from the metal reclamation screening shall not exceed 1.54 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 and 40 CFR 52.21 not applicable.

Foundry Operations - 40/40 Line

- (a) The PM emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (b) The PM10 emissions from the one (1) reverberatory melt furnace (RF-5) shall not exceed 5.0 pounds per hour.
- (c) The PM emissions from the baghouse (CD-3), controlling PM emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (d) The PM-10 emissions from the baghouse (CD-3), controlling PM-10 emissions from the one (1) pouring/casting operation (P-3), the one (1) castings cooling operation (C-3), the one (1) sand handling system (SH-2), the one (1) castings knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) shall not exceed 15.43 pounds per hour.
- (e) The PM emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.
- (f) The PM-10 emissions from the shotblasting operation (SB-2) shall not exceed 1.54 pounds per hour.
- (g) The PM emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.
- (h) The PM-10 emissions from the aluminum chip charger shall not exceed 0.93 pounds per hour.

These limits are necessary to limit the source-wide potential to emit of PM and PM10 to less than 250 tons per year to render the requirements of 326 IAC 2-2 and 40 CFR 52.21 not applicable.

Potential uncontrolled emissions of all other criteria pollutants is less than 250 tons per year, therefore, the requirements of this rule do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM10 and VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 2-4.1-1 (New Source Toxics Control)

326 IAC 2-4.1-1 applies to new or reconstructed facilities with potential emissions of any single HAP equal or greater than ten (10) tons per year and potential emissions of a combination of HAPs greater than or equal to twenty-five (25) tons per year. The rule does not apply to facilities that have been constructed before the effective date of this rule (July 27, 1997). Since the hexachloroethane fluxing operation and the coremaking facilities were all constructed prior to July 27, 1997, the requirements of 326 IAC 2-4.1-1 do not apply.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

- (1) The particulate from the emission units listed in the table below shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The allowable emissions for each facility are as follows:

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lb/hr)	Controlled/Limited Particulate Emissions (lb/hr)	In Compliance?
Reverberatory Melt Furnace #1 (RF-1)	2.00	6.52	2.00	y
Reverberatory Melt Furnace #2 (RF-2)	2.00	6.52	2.00	y
Reverberatory Melt Furnace #3 (RF-3)	2.00	6.52	2.00	y
Reverberatory Melt Furnace #4 (RF-4)	2.00	6.52	2.00	y
Pouring/Casting (P-1)	61.36*	46.50	2.00	y
Pouring/Casting (P-2)	61.36*	46.50	2.00	y
Castings Cooling (C-1,C-2)	122.70*	53.36	0.29	y

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lb/hr)	Controlled/Limited Particulate Emissions (lb/hr)	In Compliance?
Sand Handling (SH-1)	130.00	53.95	11.92	y
Knockout/Shakeout (SK-1, SK-2)	122.70*	53.36	0.65	y
Cleaning/Finishing (F-1)	8.00	16.51	2.06	y
Shotblasting (SB-1)	4.00	10.38	2.06	y
Metal Reclamation Screening	12.00	21.67	1.54	y
Reverberatory Melt Furnace #5 (RF-5)	5.00	12.05	5.00	y
Pouring/Casting (P-3)	79.00*	48.93	0.08	y
Castings Cooling (C-3)	79.00*	48.93	0.23	y
Sand Handling (SH-2)	100.00	51.28	11.81	y
Knockout/Shakeout (SK-3)	79.00*	48.93	0.52	y
Cleaning/Finishing (F-2)	5.00	12.05	2.79	y
Shotblasting (SB-2)	2.50	7.58	1.54	y
Aluminum Chip Charger	1.35	5.01	0.93	y

\* Includes metal, mold sand, and core sand throughput.

For purposes of demonstrating compliance with the particulate emission limits for the two (2) reverberatory furnaces #1 and #2 (RF-1 and RF-2) both exhausting through stack S-1, the allowable particulate emission rate from stack S-1 shall be limited to 13.04 pounds per hour.

For purposes of demonstrating compliance with the particulate emission limits for the two (2) reverberatory furnaces #3 and #4 (RF-3 and RF-4) both exhausting through stack S-2, the allowable particulate emission rate from stack S-2 shall be limited to 13.04 pounds per hour.

For purposes of demonstrating compliance with the particulate emission limits for the two (2) castings cooling operations (C-1, C-2), sand handling (SH-1), and the two (2) knockout/shakeout operations (SK-1, SK-2) all exhausting through baghouse CD-1, the allowable particulate emission rate from baghouse CD-1 shall be limited to 160.67 pounds per hour. The baghouse CD-1 shall be in operation at all times the two (2) castings cooling operations (C-1, C-2), sand handling (SH-1), and the two (2) knockout/shakeout operations (SK-1, SK-2) are in operation, in order to comply with this limit.



For purposes of demonstrating compliance with the particulate emission limits for the pouring/casting operation (P-3), the castings cooling operation (C-3), sand handling (SH-2), the knockout/shakeout operation (SK-3), and cleaning/finishing (F-2) all exhausting through baghouse CD-3, the allowable particulate emission rate from baghouse CD-3 shall be limited to 210.12 pounds per hour. The baghouse CD-3 shall be in operation at all times the pouring/casting operation (P-3), the castings cooling operation (C-3), sand handling (SH-2), the knockout/shakeout operation (SK-3), and cleaning/finishing (F-2) are in operation, in order to comply with this limit.

The baghouse CD-2 controlling the shotblasting operation (SB-1) shall be in operation at all times that the shotblaster is in operation in order to comply with the above limit.

The baghouse CD-5 controlling cleaning/finishing (F-1) shall be in operation at all times that the cleaning/finishing process is in operation in order to comply with the above limit.

The baghouse CD-6 controlling the metal reclamation screening shall be in operation at all times that the metal reclamation screening is in operation in order to comply with the above limit.

The baghouse CD-4 controlling the shotblasting operation (SB-2) shall be in operation at all times that the shotblaster is in operation in order to comply with the above limit.

The baghouse BH7 shall be in operation at all times that the aluminum chip charger is in operation in order to comply with the above limit.

- (2) Pursuant to 326 IAC 6-3-2(c), the allowable particulate emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. The manufacturing activities, sand conveyors, grinding and machining operations, and hotbox coremaking machine listed in the insignificant activities section shall be subject to this limit.

326 IAC 8-1-6 (General Reduction Requirements)

- (a) The VOC emissions from the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 0.14 pound per ton of metal throughput. The VOC emissions from the two (2) castings knockout/shakeout operations (SK-1 and SK-2) shall not exceed 1.2 pounds of VOC per ton of metal throughput. The total throughput of metal to the two (2) pouring/casting operations (P-1 and P-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The total throughput of metal to the two (2) castings knockout/shakeout operations (SK-1 and SK-2) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The metal throughput limit and the VOC emissions limits yield total VOC emissions from the pouring/casting operations (P-1 and P-2) and the castings knockout/shakeout operations (SK-1 and SK-2) that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.

- (b) The VOC emissions from the pouring/casting operation (P-3) shall not exceed 0.14 pound per ton of metal throughput. The VOC emissions from the castings knockout/shakeout operation (SK-3) shall not exceed 1.2 pounds of VOC per ton of metal throughput. The throughput of metal to each of the pouring/casting operation (P-3) and the castings knockout/shakeout operation (SK-3) shall not exceed 37,142 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The metal throughput limit and the VOC emissions limit yield total VOC emissions from the pouring/casting operation (P-3) and the castings knockout/shakeout operation (SK-3) that are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) do not apply.
- (c) In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the following conditions shall apply to core machines #1 - #13:
  - (1) The resin usage for core machines #1 - #4 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #1 - #4 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
  - (2) The resin usage for core machines #5 - #6 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #5 - #6 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
  - (3) The resin usage for core machines #7 - #8 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #7 - #8 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
  - (4) The resin usage for core machines #9 - #13 shall not exceed 332,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Amine gas catalyst usage for core machines #9 - #13 shall not exceed 33,200 pounds of amine gas catalyst per 12 consecutive month period with compliance determined at the end of each month.
  - (5) The VOC emissions (not including amine gas (TEA)) from core machines #1 - #4 shall not exceed 0.05 pounds per pound of resin.
  - (6) The VOC emissions (not including amine gas (TEA)) from core machines #5 - #6 shall not exceed 0.05 pounds per pound of resin.
  - (7) The VOC emissions (not including amine gas (TEA)) from core machines #7 - #8 shall not exceed 0.05 pounds per pound of resin.
  - (8) The VOC emissions (not including amine gas (TEA)) from core machines #9 - #13 shall not exceed 0.05 pounds per pound of resin.
  - (9) The amine gas catalyst usage in core machines #1 - #4 shall not exceed 2 pounds per ton of cores.
  - (10) The amine gas catalyst usage in core machines #5 - #6 shall not exceed 2 pounds per ton of cores.

- (11) The amine gas catalyst usage in core machines #7 - #8 shall not exceed 2 pounds per ton of cores.
- (12) The amine gas catalyst usage in core machines #9 - #13 shall not exceed 2 pounds per ton of cores.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply.

- (d) Potential VOC emissions from the five (5) reverberatory furnaces and the aluminum chip charger are less than 25 tons per year, therefore, the requirements of this rule do not apply.
- (e) Potential VOC emissions from the hexachloroethane fluxing operation are less than 25 tons per year, therefore, the requirements of this rule do not apply.

#### 326 IAC 8-3-2 (Cold Cleaner Operation)

Pursuant to 326 IAC 8-3-1(a)(2), the six (6) thirty-five (35) gallon cold-cleaner parts degreasers (insignificant activities) are subject to the requirements of 326 IAC 8-3-2 (Cold cleaner operation) since they were constructed after January 1, 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall:

- (a) Equip each cleaner with a cover;
- (b) Equip each cleaner with a facility for draining cleaned parts;
- (c) Close each degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The six (6) thirty-five (35) - gallon cold-cleaner parts degreasers (see Insignificant Activities) are also subject to the requirements of 326 IAC 8-3-5 since they were constructed after July 1, 1990. Pursuant to this rule, the Permittee shall comply with the following requirements for cold cleaner degreaser operation and control:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following control equipment requirements are met:
  - (1) Equip each degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.

- (2) Equip each degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip each degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## Testing Requirements

Testing is not required for the scrubber controlling amine gas (TEA) emissions from the core machines. Conservative emission factors were used to calculate potential amine gas (TEA) emissions from the core machines, amine gas usage is equal to amine gas emissions, and the scrubber is not required to comply with the VOC emission limits to render the requirements of 326 IAC 8-1-6 not applicable.

Testing is not required for the hexachloroethane fluxing operation because there are no applicable emission limits for this operation.

Testing is not required on baghouses CD-2, CD-4, CD-5 and CD-6 because compliance will be demonstrated through proper operation and parametric monitoring of the baghouses.

Based on IDEM, OAQ's stack test requirement criteria, testing will be required for the following emission units and/or control devices:

- (a) PM and PM10 testing is required on the two (2) reverberatory furnaces identified as RF-1 and RF-2 which exhaust through stack S-1 or the two (2) reverberatory furnaces identified as RF-3 and RF-4 which exhaust through stack S-2 in the 30/30 line and the reverberatory furnace in the 40/40 line since alternate PM and PM10 emission factors were used to calculate emissions. These emission factors must be verified by testing.
- (b) PM and PM10 testing is required on one of the pouring/casting operations in the 30/30 line and the pouring/casting operation in the 40/40 line since alternate PM and PM10 emission factors were used to calculate emissions. These emission factors must be verified by testing.
- (c) Stack ID No. CD-1 (Baghouse CD-1) - PM and PM10 testing will be required for baghouse CD-1 which controls emissions from the two (2) castings cooling operations (C-1, C-2), the sand handling operation (SH-1), and the two (2) knockout/shakeout operations (SK-1, SK-2) in the 30/30 line because the sand handling operation must use the baghouse to achieve compliance with the particulate emission limit pursuant to 326 IAC 6-3-2 and all the operations must use the baghouse to achieve compliance with the PM and PM10 limits to render the requirements of 326 IAC 2-2 (PSD) not applicable. Since all of these operations exhaust through one baghouse, compliance with the overall PM and PM10 limits for the baghouse will satisfy compliance with the limit for each operation controlled by that baghouse.
- (d) Stack ID No. CD-3 (Baghouse CD-3) - PM and PM10 testing will be required for baghouse CD-3 which controls emissions from the pouring/casting operation (P-3), the castings cooling operation (C-3), the sand handling operation (SH-2), the knockout/shakeout operation (SK-3), and the cleaning/finishing operation (F-2) in the 40/40 line because the sand handling operation and the cleaning/finishing operation must use the baghouse to achieve compliance with the particulate emission limit pursuant to 326 IAC 6-3-2 and all the operations must use the baghouse to achieve compliance with the PM and PM10 limits to render the requirements of 326 IAC 2-2 (PSD) not applicable. Since all of these operations exhaust through one baghouse, compliance with the overall PM and PM10 limits for the baghouse will satisfy compliance with the limit for each operation controlled by that baghouse.
- (e) PM and PM10 testing will be required for the aluminum chip charger because this unit must use a baghouse (BH7) to comply with the particulate emission limit pursuant to 326 IAC 6-3-2 and to achieve compliance with the PM and PM10 limits to render the requirements of 326 IAC 2-2 (PSD) not applicable. Also, since the emission calculations for this unit were based on the FIRE emission factors for melting (even though the aluminum chips are not actually melted in the aluminum chip charger) because there are no specific emission factors for this type of unit, testing is required to verify emissions.

## **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The pouring/casting (P-3), castings coolings (C-1,C-2,C-3), sand handling (SH-1,SH-2), knockout/shakeout (SK-1,SK-2, SK-3), cleaning/finishing (F-1, F-2), and shotblasting (SB-1, SB-2) operations, the metal reclamation screening, and the aluminum chip charger have applicable compliance monitoring conditions as specified below:
  - (a) Visible emission notations of the CD-1, CD-3, and BH7 baghouse stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (b) The Permittee shall record the total static pressure drop across each of the baghouses identified as CD-1, CD-2, CD-3, CD-4, CD-5, CD-6, and BH7 controlling the pouring/casting (P-3), castings cooling (C-1,C-2,C-3), sand handling (SH-1,SH-2), knockout/shakeout (SK-1,SK-2, SK-3), cleaning/finishing (F-1,F-2), and shotblasting (SB-1, SB-2) operations, the metal reclamation screening, and the aluminum chip charger, at least once per shift when the systems are in operation. When for any one reading, the pressure drop across any of the baghouses is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (c) An inspection shall be performed each calendar quarter of all bags controlling the pouring/casting (P-3), castings cooling (C-1,C-2,C-3), sand handling (SH-1,SH-2), knockout/shakeout (SK-1,SK-2, SK-3), cleaning/finishing (F-1,F-2), and shotblasting (SB-1, SB-2) operations, the metal reclamation screening, and the aluminum chip charger. All defective bags shall be replaced.
  - (d) In the event that bag failure has been observed:

- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouses for these units must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70) and render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Note: Visible emission notations are not required for the baghouses CD-2, CD-4, CD-5, and CD-6 because these units exhaust inside the building and there is no ductwork that would allow them to exhaust outside the building.

## Conclusion

The operation of this stationary aluminum foundry for the production of aluminum castings shall be subject to the conditions of the attached proposed **Part 70 Permit No. T183-7530-00023**.

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Address City IN Zip: 2300 Cardinal Drive, Columbia City, Indiana 46725  
Title V: T183-7530-00023  
Reviewer: TE/EVP

Uncontrolled Potential Emissions (tons/year)						
Pollutant	30/30 Line	40/40 Line	Emissions Generating Activity			TOTAL
			Coremaking	Hexachloroethane Fluxing	Natural Gas Combustion From Insignificant Activities	
PM	3,346.32	2,294.28	0.00	0.00	0.09	5,640.69
PM10	605.31	420.34	0.00	0.00	0.36	1,026.01
SO2	0.79	0.51	0.00	0.00	0.03	1.33
NOx	14.80	11.74	0.00	0.00	4.73	31.27
VOC	82.78	35.54	100.78	23.35	0.26	242.71
CO	12.14	9.68	0.00	0.00	3.97	25.79
total HAPs	0.27	0.22	67.19	51.76	0.09	119.55
worst case single HAP**	(Hexane) 0.26	(Hexane) 0.21	(TEA) 67.19	(HCl) 27.90	(Hexane) 0.09	(TEA) 67.19

Total emissions based on rated capacity at 8,760 hours/year.

Controlled/Limited Emissions (tons/year)						
Emissions Generating Activity						
Pollutant	30/30 Line	40/40 Line	Coremaking	Hexachloroethane Fluxing	Natural Gas Combustion From Insignificant Activities	TOTAL
PM	133.65	100.30	0.00	0.00	0.09	234.04
PM10	133.65	100.33	0.00	0.00	0.36	234.34
SO2	0.46	0.44	0.00	0.00	0.03	0.93
NOx	14.64	11.71	0.00	0.00	4.73	31.08
VOC	32.69	31.08	46.48	23.35	0.26	133.86
CO	12.14	9.68	0.00	0.00	3.97	25.79
total HAPs	0.27	0.22	13.28	51.76	0.09	65.62
worst case single HAP**	(Hexane) 0.26	(Hexane) 0.21	(TEA) 13.28	(HCl) 27.90	(Hexane) 0.09	(HCl) 27.90

Total emissions based on rated capacity at 8,760 hours/year, after control and limitations.

The emissions from the 40/40 Line include emissions from the aluminum chip charger.  
Controlled/Limited VOC and TEA emissions from coremaking include VOC limit to render 326 IAC 8-1-6 (BACT) not applicable and control of TEA emissions by scrubber.



Appendix A: Aluminum

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

Potential Uncontrolled Emissions for 30/30 line

SCC# 3-04-001-03 Reverberatory Furnaces (RF-1 - RF-4)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	16000	2000	8			
	PM lbs/ton Produced 1.0	PM10 lbs/ton Produced 1.0	SOx lbs/ton Produced 0	NOx lbs/ton Produced 0	VOC lbs/ton Produced 0.2	CO lbs/tons Produced --
Potential Emissions lbs/hr	8.00	8.00	0.00	0.00	1.60	--
Potential Emissions lbs/day	192.00	192.00	0.00	0.00	38.40	--
Potential Emissions tons/year	35.04	35.04	0.00	0.00	7.01	--
Note: PM and PM10 emission factors based on stack testing performed at this plant on 4/16/1997. These emission factors will be verified by a stack test on either RF-1 and RF-2 or RF-3 and RF-4. VOC emission factor from US EPA's FIRE v 6.23.						
SCC# 3-04-003-25 Castings Cooling (C-1, C-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	16000	2000	8			
	PM lbs/ton metal produced 1.4	PM10 lbs/ton metal produced 1.4	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/ton metal produced --
Potential Emissions lbs/hr	11.20	11.20	0.00	0.00	0.00	--
Potential Emissions lbs/day	268.80	268.80	0.00	0.00	0.00	--
Potential Emissions tons/year	49.06	49.06	0.00	0.00	0.00	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-001-14 Pouring/Casting (P-1, P-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	16000	2000	8			
	Limited Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8480	2000	4.24			
	PM lbs/ton metal produced 0.5	PM10 lbs/ton metal produced 0.5	SOx lbs/ton metal produced 0.02	NOx lbs/ton metal produced 0.01	VOC lbs/ton metal produced 0.14	CO lbs/tons metal produced --
Potential Emissions lbs/hr	4.00	4.00	0.16	0.08	1.12	--
Potential Emissions lbs/day	96.00	96.00	3.84	1.92	26.88	--
Potential Emissions tons/year	17.52	17.52	0.70	0.35	4.91	--
Limited Emissions lbs/hr	2.12	2.12	0.08	0.04	0.59	--
Limited Emissions lbs/day	50.88	50.88	2.04	1.02	14.25	--
Limited Emissions tons/year	9.29	9.29	0.37	0.19	2.60	--
Note: PM and PM10 emission factors based on stack testing performed at this plant on 4/16/1997. These emission factors will be verified by a stack test on one of these units. SO2, NOx, and VOC emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-40 Cleaning/Finishing (F-1)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8000	2000	8			
	PM lbs/ton metal produced 17	PM10 lbs/ton metal produced 1.7	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/tons metal produced --
Potential Emissions lbs/hr	136.00	13.60	--	--	--	--
Potential Emissions lbs/day	3,264.00	326.40	--	--	--	--
Potential Emissions tons/year	595.68	59.57	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
<b>Subtotal (Uncontrolled):</b>	<b>697.30</b>	<b>161.18</b>	<b>0.70</b>	<b>0.35</b>	<b>11.91</b>	<b>0.00</b>

## Appendix A: Aluminum

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Address City IN Zip: 2300 Cardinal Drive, Columbia City, Indiana 46725  
Title V: T183-7530-00023  
Reviewer: TE/EVP

## Potential Uncontrolled Emissions for 30/30 line.

SCC# 3-04-003-50 Sand Handling (SH-1)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	260000	2000	130			
	PM lbs/ton Sand Handled 3.6	PM10 lbs/ton Sand Handled 0.54	SOx lbs/ton Sand Handled --	NOx lbs/ton Sand Handled --	VOC lbs/ton Sand Handled --	CO lbs/ton Sand Handled --
Potential Emissions lbs/hr	468.00	70.20	--	--	--	--
Potential Emissions lbs/day	11232.00	1684.80	--	--	--	--
Potential Emissions tons/year	2049.84	307.48	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-31 Castings Knockout/Shakeout (SK-1, SK-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	16000	2000	8			
	Limited Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8480	2000	4.24			
	PM lbs/ton metal charged 3.2	PM10 lbs/ton metal charged 2.24	SOx lbs/ton metal charged --	NOx lbs/ton metal charged --	VOC lbs/ton metal charged 1.20	CO lbs/ton metal charged --
Potential Emissions lbs/hr	25.60	17.92	--	--	9.60	--
Potential Emissions lbs/day	614.40	430.08	--	--	384.00	--
Potential Emissions tons/year	112.13	78.49	--	--	70.08	--
Limited Emissions lbs/hr	13.57	9.50	--	--	5.09	--
Limited Emissions lbs/day	325.63	227.94	--	--	122.11	--
Limited Emissions tons/year	59.43	41.60	--	--	22.29	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-40 Shotblasting (SB-1)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8000	2000	4			
	PM lbs/ton metal produced 17	PM10 lbs/ton metal produced 1.7	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/ton metal produced --
Potential Emissions lbs/hr	68.00	6.80	--	--	--	--
Potential Emissions lbs/day	1632.00	163.20	--	--	--	--
Potential Emissions tons/year	297.84	29.78	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-50 Metal Screening - Sand System						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	24000	2000	12			
	PM lbs/ton Sand Handled 3.6	PM10 lbs/ton Sand Handled 0.54	SOx lbs/ton Sand Handled --	NOx lbs/ton Sand Handled --	VOC lbs/ton Sand Handled --	CO lbs/ton Sand Handled --
Potential Emissions lbs/hr	43.20	6.48	--	--	--	--
Potential Emissions lbs/day	1036.80	155.52	--	--	--	--
Potential Emissions tons/year	189.22	28.38	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						

Subtotal (Uncontrolled): 2,649.02 444.13 0.00 0.00 70.08 0.00

Appendix A: Aluminum

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Address City IN Zip: 2300 Cardinal Drive, Columbia City, Indiana 46725  
Title V: T183-7530-00023  
Reviewer: TE/EVP

Potential Uncontrolled Emissions for 40/40 line

SCC# 3-04-001-03 Reverberatory Furnace (RF-5)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	10000	2000	5			
	PM lbs/ton Produced 1.0	PM10 lbs/ton Produced 1.0	SOx lbs/ton Produced --	NOx lbs/ton Produced --	VOC lbs/ton Produced 0.2	CO lbs/tons Produced --
Potential Emissions lbs/hr	5.00	5.00	0.00	0.00	1.00	--
Potential Emissions lbs/day	120.00	120.00	0.00	0.00	24.00	--
Potential Emissions tons/year	21.90	21.90	0.00	0.00	4.38	--
Note: PM and PM10 emission factors based on stack testing performed at this plant on 4/16/1997. These emission factors will be verified by a stack test on this unit. VOC emission factor from US EPA's FIRE v 6.23.						
SCC# 3-04-003-25 Castings Cooling (C-3)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	10000	2000	5			
	PM lbs/ton metal produced 1.4	PM10 lbs/ton metal produced 1.4	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/ton metal produced --
Potential Emissions lbs/hr	7.00	7.00	0.00	0.00	0.00	--
Potential Emissions lbs/day	168.00	168.00	0.00	0.00	0.00	--
Potential Emissions tons/year	30.66	30.66	0.00	0.00	0.00	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-001-14 Pouring/Casting (P-3)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	10000	2000	5			
	Limited Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8480	2000	4.24			
	PM lbs/ton metal produced 0.5	PM10 lbs/ton metal produced 0.5	SOx lbs/ton metal produced 0.02	NOx lbs/ton metal produced 0.01	VOC lbs/ton metal produced 0.14	CO lbs/tons metal produced --
Potential Emissions lbs/hr	2.50	2.50	0.10	0.05	0.70	--
Potential Emissions lbs/day	60.00	60.00	2.40	1.20	16.80	--
Potential Emissions tons/year	10.95	10.95	0.44	0.22	3.07	--
Limited Emissions lbs/hr	2.12	2.12	0.08	0.04	0.59	--
Limited Emissions lbs/day	50.88	50.88	2.04	1.02	14.25	--
Limited Emissions tons/year	9.29	9.29	0.37	0.19	2.60	--
Note: PM and PM10 emission factors based on stack testing performed at this plant on 4/16/1997. These emission factors will be verified by a stack test on this unit. SO2, NOx, and VOC emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-40 Cleaning/Finishing (F-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	10000	2000	5			
	PM lbs/ton metal produced 17	PM10 lbs/ton metal produced 1.7	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/tons metal produced --
Potential Emissions lbs/hr	85.00	8.50	--	--	--	--
Potential Emissions lbs/day	2040.00	204.00	--	--	--	--
Potential Emissions tons/year	372.30	37.23	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						

Subtotal (Uncontrolled): 435.81 100.74 0.44 0.22 7.45 0.00

Appendix A: Aluminum

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Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Address City IN Zip: 2300 Cardinal Drive, Columbia City, Indiana 46725  
Title V: T183-7530-00023  
Reviewer: TE/EVP

Potential Uncontrolled Emissions for 40/40 line.

SCC# 3-04-003-50 Sand Handling (SH-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	200000	2000	100			
	PM lbs/ton Sand Handled 3.6	PM10 lbs/ton Sand Handled 0.54	SOx lbs/ton Sand Handled --	NOx lbs/ton Sand Handled --	VOC lbs/ton Sand Handled --	CO lbs/ton Sand Handled --
Potential Emissions lbs/hr	360.00	54.00	--	--	--	--
Potential Emissions lbs/day	8640.00	1296.00	--	--	--	--
Potential Emissions tons/year	1576.80	236.52	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-31 Castings Knockout/Shakeout (SK-3)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	10000	2000	5			
	Limited Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	8480	2000	4.24			
	PM lbs/ton metal charged 3.2	PM10 lbs/ton metal charged 2.24	SOx lbs/ton metal charged --	NOx lbs/ton metal charged --	VOC lbs/ton metal charged 1.20	CO lbs/ton metal charged --
Potential Emissions lbs/hr	16.00	11.20	--	--	6.00	--
Potential Emissions lbs/day	384.00	268.80	--	--	144.00	--
Potential Emissions tons/year	70.08	49.06	--	--	26.28	--
Limited Emissions lbs/hr	13.57	9.50	--	--	5.09	--
Limited Emissions lbs/day	325.63	227.94	--	--	122.11	--
Limited Emissions tons/year	59.43	41.60	--	--	22.29	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-003-40 Shotblasting (SB-2)						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum	5000	2000	2.5			
	PM lbs/ton metal produced 17	PM10 lbs/ton metal produced 1.7	SOx lbs/ton metal produced -	NOx lbs/ton metal produced -	VOC lbs/ton metal produced -	CO lbs/ton metal produced --
Potential Emissions lbs/hr	42.50	4.25	--	--	--	--
Potential Emissions lbs/day	1020.00	102.00	--	--	--	--
Potential Emissions tons/year	186.15	18.62	--	--	--	--
Note: PM and PM10 emission factors from US EPA's FIRE v 6.23.						
SCC# 3-04-001-03 Aluminum Chip Charger*						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum Chips	2700	2000	1.35			
	PM lbs/ton Produced 4.3	PM10 lbs/ton Produced 2.6	SOx lbs/ton Produced --	NOx lbs/ton Produced --	VOC lbs/ton Produced 0.2	CO lbs/ton Produced --
Potential Emissions lbs/hr	5.8	3.5	--	--	0.27	--
Potential Emissions lbs/day	139.3	84.2	--	--	6.48	--
Potential Emissions tons/year	25.43	15.37	--	--	1.18	--
* The above emissions represent PM and PM10 emissions from the melting of aluminum chips in the existing Reverberatory Furnace identified as RF-5. However, since the aluminum chip charger charges 1.35 tons of aluminum chips per hour to RF-5, the PM and PM10 emissions from this charge capacity is attributed to the aluminum chip charger. Note: PM, PM10, and VOC emission factors from US EPA's FIRE v 6.23.						
Subtotal (Uncontrolled):	1,858.46	319.56	0.00	0.00	27.46	0.00

## Appendix A: Particulate Emissions

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Address City IN Zip: 2300 Cardinal Drive, Columbia City, Indiana 46725  
Title V: T183-7530-00023  
Reviewer: TE/EVP

PROCESS	Baghouse ID	Total Process Weight Rate* (tons/hr)	Uncontrolled Emissions (lbs/hr)		CFM	Grain Loading (gr/dscf) PM-10	Controlled/Limited Emissions (lbs/hr)		Allowable Emissions (326 IAC 6-3-2) PM (lb/hr)	PSD Minor Limit (326 IAC 2-2)			
			PM	PM-10			PM	PM-10		PM (lb/hr)	PM (lb/hr)	PM (tons/yr)	PM-10 (lb/hr)
30/30 Line													
Reverb. Furnace (RF-1)*	none	2.0	2.00	2.00			2.00	2.00	6.52	2.00	8.76	2.00	8.76
Reverb. Furnace (RF-2)*	none	2.0	2.00	2.00			2.00	2.00	6.52	2.00	8.76	2.00	8.76
Reverb. Furnaces (RF-3)*	none	2.0	2.00	2.00			2.00	2.00	6.52	2.00	8.76	2.00	8.76
Reverb. Furnace (RF-4)*	none	2.0	2.00	2.00			2.00	2.00	6.52	2.00	8.76	2.00	8.76
Pouring/Casting (P-1)*	none	61.4	2.00	2.00			2.00	2.00	46.50	2.00	8.76	2.00	8.76
Pouring/Casting (P-2)*	none	61.4	2.00	2.00			2.00	2.00	46.50	2.00	8.76	2.00	8.76
Castings Coolings (C-1,C-2)*	CD-1	122.7	11.20	11.20	50000	0.03	12.86	12.86	53.36	12.86	56.31	12.86	56.31
Sand Handling (SH-1)	CD-1	130.0	468.00	70.20					53.95				
Knockout/Shakeout (SK-1, SK-2)*	CD-1	122.7	25.60	17.92					53.36				
Cleaning/Finishing (F-1)	CD-5	8.0	136.00	13.60	8000	0.03	2.06	2.06	16.51	2.06	9.01	2.06	9.01
Shotblasting (SB-1)	CD-2	4.0	68.00	6.80	8000	0.03	2.06	2.06	10.38	2.06	9.01	2.06	9.01
Metal Screening - Sand System	CD-6	12.0	43.20	6.48	6000	0.03	1.54	1.54	21.67	1.54	6.76	1.54	6.76
40/40 Line									Subtotal (tons/yr)		133.65		133.65
Heated Cylone for Chip Charger	none	n/a	0.002	0.01			0.002	0.01	n/a	0.002	0.010	0.01	0.040
Reverb. Furnace (RF-5)	none	5.0	5.00	5.00			5.00	5.00	12.05	5.00	21.90	5.00	21.90
Pouring/Casting (P-3)	CD-3	79.0	2.50	2.50	60000	0.03	15.43	15.43	48.93	15.43	67.58	15.43	67.58
Castings Coolings (C-3)	CD-3	79.0	7.00	7.00					48.93				
Sand Handling (SH-2)	CD-3	100.0	360.00	54.00					51.28				
Knockout/Shakeout (SK-3)	CD-3	79.0	16.00	11.20					48.93				
Cleaning/Finishing (F-2)	CD-3	5.0	85.00	8.50					12.05				
Shotblasting (SB-2)	CD-4	2.5	42.50	4.25	6000	0.03	1.54	1.54	7.58	1.54	6.76	1.54	6.76
Aluminum chip charger	BH7	1.35	5.81	3.51	3600	0.03	0.93	0.93	5.01	0.93	4.05	0.93	4.05
									Subtotal (tons/yr)		100.30		100.33
Total Emissions (lbs/hr)			1287.81	234.17					Total	53.41	233.95	53.42	233.98
Total Emissions (tons/yr)			5640.60	1025.66									

\* Represents the total process weight rate

All controlled PM and PM10 emissions are based on the maximum control device grain loading and flow rate as shown.

# Appendix A: Core Making Calculations

Page 7 of 14, TSD App. A

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
 Plant Location: 2300 Cardinal Drive, Columbia City, Indiana 46725  
 County: Whitley  
 Permit Reviewer: TE/EVP  
 Title V #: 183-7530  
 Plt. ID #: 183-00023

## Isocure Core Making Process

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Max TEA Usage (lb TEA/ton cores)	Potential VOC Emissions from resin evap (tons/yr)	Potential TEA Emissions from TEA usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
#1 to #4	1985	2.36	1%	1	2	10.34	20.67	31.01
#5 and #6	1988	1.18	1%	1	2	5.17	10.34	15.51
#7 and #8	1989	1.18	1%	1	2	5.17	10.34	15.51
#9 to #13	1995	2.95	1%	1	2	12.92	25.84	38.76
Total							67.19	100.78

Limits Necessary to render 326 IAC 8-1-6 (BACT) not applicable:

Core Machines	VOC limit (tons/yr)	VOC EF for resin evaporation (lb/ton cores)	VOC EF for resin evaporation (lb VOC/lb resin)	TEA EF (lb/ton cores)	core production (tons cores/yr)	TEA usage limit (lbs/yr)	resin usage limit (lbs/yr)
#1 to #4	24.9	1	0.05	2	16,600	33,200	332,000
#5 and #6	24.9	1	0.05	2	16,600	33,200	332,000
#7 and #8	24.9	1	0.05	2	16,600	33,200	332,000
#9 to #13	24.9	1	0.05	2	16,600	33,200	332,000
Total					66,400	132,800	1,328,000

Core Machines	Controlled TEA Emissions (tons/yr)	Limited VOC Emissions from Resin (tons/yr)	TEA Scrubber Control Eff. (%)
#1 to #4	3.32	8.30	80.00%
#5 and #6	3.32	8.30	80.00%
#7 and #8	3.32	8.30	80.00%
#9 to #13	3.32	8.30	80.00%
Total	13.28	33.20	

Total VOC Emissions after control (tons/yr): 46.48

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only (30/30 and 40/40 Lines)**  
**MM BTU/HR <100**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
<b>30/30 Line</b>	33.0	289.1
<b>40/40 Line</b>	25.0	219.0

Heat Input Capacity includes:

30/30 Line - four (4) reverb furnaces identified as RF-1, RF-2, RF-3, and RF-4, each having a rated capacity of 8.25 mmBtu/hr;

40/40 Line - one (1) reverberatory furnace identified as RF-5, rated capacity of 25 mmBtu/hr

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	--	--	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr (30/30 Line)	--	--	0.09	14.45	0.79	12.14
Potential Emission in tons/yr (40/40 Line)	--	--	0.07	10.95	0.60	9.20

\*PM and PM10 emissions from combustion are included in emission factors for melting emissions. See pages 2 and 4 of Appendix A for emissions from furnace

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

### Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 9 for HAPs emissions calculations.

**Appendix A: Emissions Calculations****Natural Gas Combustion Only****MM BTU/HR <100****HAPs Emissions**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

**HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr (30/30 Line)	3.035E-04	1.734E-04	1.084E-02	2.602E-01	4.914E-04
Potential Emission in tons/yr (40/40 Line)	2.300E-04	1.314E-04	8.213E-03	1.971E-01	3.723E-04

**HAPs - Metals**

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr (30/30 Line)	7.227E-05	1.590E-04	2.024E-04	5.493E-05	3.035E-04
Potential Emission in tons/yr (40/40 Line)	5.475E-05	1.205E-04	1.533E-04	4.161E-05	2.300E-04

Methodology is the same as page 8.

The five highest organic and metal HAPs emission factors are provided above.  
Additional HAPs emission factors are available in AP-42, Chapter 1.4.



**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

1.3

11.4

Heat Input Capacity includes:

one (1) heated cyclone on the aluminum chip charger rated at 1.3 mmBtu/hr

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.01	0.04	0.00	0.57	0.03	0.48

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

### Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 11 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**HAPs Emissions**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.196E-05	6.833E-06	4.271E-04	1.025E-02	1.936E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.847E-06	6.263E-06	7.972E-06	2.164E-06	1.196E-05

Methodology is the same as page 10.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

10.8

94.6

**Insignificant Activities**

Heat Input Capacity includes:

one (1) air make-up unit rated at 8.8 mmBtu/hr

one (1) air make-up unit rated at 2.0 mmBtu/hr

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.09	0.36	0.03	4.73	0.26	3.97

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 13 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**HAPs Emissions**

**Company Name:** Fort Wayne Foundry Corp., Columbia City Division  
**Address City IN Zip:** 2300 Cardinal Drive, Columbia City, Indiana 46725  
**Title V:** T183-7530-00023  
**Reviewer:** TE/EVP

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	9.934E-05	5.676E-05	3.548E-03	8.515E-02	1.608E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.365E-05	5.203E-05	6.623E-05	1.798E-05	9.934E-05

Methodology is the same as page 12.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**

Page 14 of 14, TSD App. A

Company Name: Fort Wayne Foundry Corp., Columbia City Division  
Plant Location: 2300 Cardinal Drive, Columbia City, Indiana 46725  
County: Whitley  
Permit Reviewer: TE/EVP  
Title V #: 183-7530  
Plt. ID #: 183-00023

Emission Unit	Hexachloroethane Flux Usage  (lbs/yr)	Pollutant	EF (lb/lb org flux)	Emissions before Controls (tons/yr)	Emissions after Controls (tons/yr)	Control Device	Control Efficiency (%)
Hexachloroethane Fluxing Operation	113880	PM	included in melting emissions			none	
		PM10	included in melting emissions			none	
		VOC	0.41	23.35	23.35	none	
		HCl	0.49	27.90	27.90	none	
		HF	0.009	0.51	0.51	none	
		hexachloroethane	0.41	23.35	23.35	none	
Total HAPs				51.76	51.76		

[Note: Emission factors are from stack test results for organic flux usage at another aluminum foundry performed in December, 2001.  
(General Motors, Bedford, IN).

Flux usage is based on a usage rate of 1 lb/ton metal melted. The usage represents usage for both the 30/30 line  
and the 40/40 line.

Hexachloroethane is also a VOC, therefore, the hexachloroethane emission factor was used to calculate VOC emissions.

HCl and HF are not VOCs.